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Issue No 9, September 1963

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IMPERIALIST HISTORICAL WORK IN THE ARMED FORCES
RESULTING FROM THE DECISIONS OF THE
JUNE PLENUM OF THE CENTRAL COMMITTEE CCPSU

CPYRGHT

by Mar SU S. Biryuzov

The June Plenum of the CC CPSU occupies a special place among the most important actions of the CPSU directed at placing into effect the grand program of the building of communism.

The grandiose successes of our Motherland in the fields of economic, political and military development and the steadily growing power of the entire socialist camp leave for the imperialists no further hopes or prospects for a victory over the socialist order either by military force or in economic competition. Therefore the ruling circles of the imperialist powers are now gambling chiefly on disrupting the socialist camp from within by poisoning the minds of the popular masses with corrupt bourgeois ideology and by undermining the faith of the people in the achievement of the ultimate goals of communism, on whose banner shine like a guiding star the exciting words of our party's Program: Peace, Labor, Freedom, Equality, Brotherhood and Happiness of all peoples on Earth.

With this aim the bosses of imperialism, using the mercenary-ness of scientists, literary and art workers of the bourgeois world, invent new methods of ideological diversion; intensively mobilize the means of psychological warfare in an attempt to "cut into the very heart of communist ideology"; attempt to penetrate socialist countries, shake the foundations of the new order, and interfere with the further spread of the ideas of Marxism-Leninism in order to maintain their positions and put off the inevitable fate of the exploiting society. "Psychological warfare", said L. F. Il'ichev in a report to the Plenum, "has been elevated by imperialism to the rank of government policy."

Thus under present conditions the ideological front has been transformed into one of the decisive factors in the struggle for the victory of communism. This situation predetermined the exceptional significance of the June Plenum of the CC CPSU, at which a whole series of questions of ideological work were subjected to broad discussion and specific steps for its further development and improvement were examined and approved.

The June Plenum of the CC CPSU and its decisions were the greatest event in the ideal political life of the party and country. The idea of irreconcilability with bourgeois ideology in all its forms and manifestations is emphasized throughout all the Plenum's work. Proceeding from the decisions of the 22nd Congress and the party Program, the Plenum determined the basic directions and specific tasks in the field of communist education of the workers.

Instilling in people a love for the socialist Motherland and the great Leninist party is one of the main and most important tasks of ideological work stemming from the decisions of the June Plenum of the CC CPSU.

Plenum decisions also have a direct relationship to the Soviet Armed Forces.

Strengthening the security of our Motherland and the might of the Army and Navy is a vital task for all our people. It is for this very reason, organizing and strengthening the common front of ideological work of the party and decisively crushing the attempts at ideological diversions on the part of the imperialists, that it is necessary to constantly improve in every possible way the military-patriotic education of personnel of the Soviet Army and Navy.

It is known that the might of our Armed Forces is based not only on first-class military equipment, but also primarily on the people in whose hands this equipment is placed. The further improvement of ideological work in accordance with the requirements of the June Plenum of the CC CPSU, the rise in moral combat qualities of Soviet Armed Forces personnel, their education in the best traditions of the heroic past of our people, the development of a sense of international duty and of devotion to the Motherland and party -- this is the specific path for placing into effect the decisions of the June Plenum of the CC CPSU.

In light of the decisions by the 20th and 22nd CPSU Congresses and also by the June Plenum of the CC of our party, military historic work in the Armed Forces has taken on great meaning. And this is quite proper if we consider that military history, as an inalienable part of Soviet historical science, becomes in present times one of the most important elements in the overall system of ideological work by our party.

It will be no exaggeration to state that the brightest pages of Soviet history are closely connected with long years of struggle of the peoples of our Motherland against foreign usurpers, i.e. with military history and with the history of the Soviet Armed Forces. In the course of this struggle the socialist government accumulated an enormous amount of experience obtained at the cost of the lives of millions of Soviet people and colossal material expenditures. There will remain unforgotten in the hearts of generations the heroism and courage and the grand love for the Motherland displayed by our people in the defense of the country of socialism against external and internal enemies.

The heroic past of the Soviet people and its Armed Forces has been recorded in world history in golden letters. In addition it

serves as a powerful means of educating and forming a new person -- a builder of communist society. Therefore it is not by chance that the Communist Party, following the advice of V. I. Lenin, devotes over greater attention to the deep and thorough study of the accumulated experience of the struggle of the Soviet people and to the wide propaganda of this experience for the purpose of instilling in the Soviet people a spirit of patriotism and proletarian internationalism, and for the purpose of a general strengthening of the military might of our government and of all countries of the socialist camp.

We cannot forget in this regard the remarkable words of Nikita Sergeyevich Khrushchev in his address to the Soviet youth: "And we would like to advise our young people: learn from the history of the revolution and from the history of the struggle in which your fathers and mothers took part, hold sacred the memory of those no longer living and be respectful to those who are still living; take from them into your own hands as armament everything, so that you will be worthy people, worthy perpetuators of the affairs of your fathers." For us, soldiers of the Soviet Army and Navy, the appeal of the Supreme Commander of the Armed Forces N. S. Khrushchev has a special meaning. It expresses the constant concern of the head of the Soviet government about the steady strengthening of the defensive capabilities of the first country of socialism in the world. Truly, the more thoroughly the defenders of the Motherland gain the military experience obtained in past encounters with the enemy, the more strongly they become imbued with a sense of responsibility for an assigned task, the more widely they use in training examples of supreme service to the Native land, of the heroism and courage of older generations, and constant reliance upon the glorious combat traditions of the Russian people, then it will be with greater patriotic energy that they fulfill their sacred duty to the Motherland. The arming of our military cadres, and especially the young generation of soldiers, with thorough military historical knowledge is the most important and noble aim of the workers on the ideological front.

The unusually rich heroic past of our people, the presence of combat experience gained under various situations, numerous examples of mass heroism, courage and unlimited devotion of the Soviet people to the ideas of Marxism-Leninism and the native party create exceptionally favorable soil for a general development of fruitful, purposeful ideological work in the Soviet Armed Forces.

From the first days of its existence our government has had to repulse the attacks of imperialist aggressors. The Great Patriotic War was an especially difficult test for our people. The solidarity of the socialist order and the unity of party and people, front and rear, was subjected to a thorough test in the military

encounter of exceptional scale with Hitler's Germany. The Soviet Union emerged from this test even stronger and with the front of socialism having broadened, which led to the creation of a world socialist system. At the same time the forces of imperialism weakened. Thus the next attempt by world imperialism to gain victory over the socialist government by military means met with failure.

The Great Patriotic War and the military experience gained from it determined the direction and content of military historical work in the Armed Forces. This work bore an exceptionally purposeful nature and was closely allied with the practical tasks of a steady increase in the defensive capabilities of the Soviet Army and Navy. All of the most substantial conclusions and best forms of organization and conduct of combat operations obtained and discovered in the process of studying the experience became the property of the troops and staffs, the military academies and schools.

In accordance with the new tasks, significant changes were introduced into programs on military history and new courses of lectures were developed which took into account the experience of the war. In addition to major historical articles on various questions, monographs were developed on individual operations and on the war as a whole.

In spite of the considerable revival of military historical work with the beginning of the Great Patriotic War, many works written and published at that time, and especially in the first postwar years, bore a one-sided nature. It should be stressed that even here the personality cult of Stalin placed a seal of nonobjectivity on the illumination of historical events. It is known that Stalin for a long time devoted much effort to an exaltation of his own role and services in leadership, not only as a political, but also as a military figure. Such self-acclaim took on unusually broad scope during the Great Patriotic War and especially after the victory over fascist Germany. Moreover he did not hesitate at a distortion and pure falsification of facts. Thus, for example, in answering the letter of Col Razin in 1946, Stalin with complete bias evaluated the military work of V. I. Lenin, affirming that "...Lenin did not consider himself an expert in military affairs. This was true not only in the past, before the October Revolution, but also afterwards, after the October Revolution and right up to the end of the Civil War... As concerned himself, he told us frankly that it was already late for him to study military matters."

From beginning to end, the statements by Stalin concerning the military knowledge of V. I. Lenin were based on fiction. This is attested to by the memoirs of people who knew Lenin well. Thus

the friend and companion of Vladimir Il'ich, Nadezhda Konstantinovna Krupskaya, writes: "Il'ich not only re-read and in the most thorough manner studied and thought over everything written by Marx and Engels about revolution and revolt, he also read many books on military art, contemplating from all sides the techniques of armed uprising and its organization. He did this much more than is known, and his talks on shock groups in partisan warfare and on "fives and tens" were not the ramblings of an ignorant person, but a thoroughly thought out plan" ([Note]: N. K. Krupskaya, Vospominaniya o Lenine (Memories of Lenin), State Political Publishing House, 1957, page 92.).

Illuminating the intense work of V. I. Lenin during the Civil War, Krupskaya in her memoirs notes further: "Il'ich knew well what was going on at the fronts; he was connected directly with the fronts and commanded the entire struggle..." ([Note]: N. K. Krupskaya, Vospominaniya o Lenine, page 101.). It is quite clear to everyone that only a person who knows and understands military matters well can lead an armed struggle. V. I. Lenin was just such a person.

In the same letter to Col Razin Stalin stated that allegedly V. I. Lenin did not handle questions of strategy at all. This is also not true. In the book by Gen M. D. Bonch-Bruyevich Vsya vlast' sovetam (All Power to the Soviets), there is affirmation of the fact that Lenin also studied thoroughly questions of military strategy. Thus Vladimir Il'ich read with unusual attention the three volume Strategiya (Strategy) of one of the most prominent Russian military theoreticians -- Gen Leyer Genrikh Antanovich.

How skillfully V. I. Lenin used his military knowledge is shown by the article by Podvoyskiy Lenin v dni perevorota (Lenin in the Days of the Overthrow) ([Note]: Krasnaya Gazeta (Red Gazette), 6 November 1927), in which the author very clearly characterizes the enormous work done by Lenin during the defense of Petrograd at the most tense moment of the White Guard insurrection. While listening to the report of Antonov-Cvseyenko, Lenin examined the map. With the acuteness of the most thorough and attentive strategist and troop leader, he made a number of extremely important remarks concerning the organization of the defense of Petrograd, and demanded for the defense of the most important points the concentration of necessary forces at the cost of transferring troops from Kronstadt, Vyborg and Helsingfors. "From an exchange of opinions," Podvoyskiy writes further, "it became clear that we really had made a whole series of blunders and had not displayed that extraordinary activity which the threatening situation of Peterburg demanded in regards to the organization of forces and means for its defense."

An analysis of many works by V. I. Lenin incontrovertibly

proves that he studied military affairs seriously and thoroughly, that he knew military matters and skillfully applied his knowledge in the struggle for victory of the Soviet power. Stalin needed the falsification of the truth in order to represent himself as the single major military authority, the sole expert in military affairs. This purpose was also served in particular by the several republications of Stalin's book O Velikoy Otechestvennoy voyne Sovetskogo Soyuza (On the Great Patriotic War of the Soviet Union). The statements put forward in it could not be subjected to a critical analysis or scientific research with new conclusions which differed from Stalin's.

Stalin's personality cult retarded the development of historical science. In works published during the time of the personality cult the events of the Great Patriotic War were not subjected to a deep critical analysis. Victories of our Armed Forces were described in detail, and all this was presented as result of the wise Stalin leadership, as a result of the military genius of "the strategist of all times and peoples."

The enormous significance of the decisions of the 20th and 22nd Congresses of our party, which were directed at uprooting and eliminating the errors connected with Stalin's personality cult, lies in the fact that they facilitated the revival of military historical work in the Armed Forces and an increase in its quality and the depth of research of many questions which previously were presented in a distorted form or were concealed altogether. Having been freed from the heavy shackles of the personality cult and using the favorable conditions which arose for creative work, military historians have recently created many major military historical works which objectively illuminate the experience of the Great Patriotic War. In addition to capital works which deeply investigate the questions of strategy, operational art and tactics, there have been redone and newly created textbooks on the history of military art, and there have been written and published a considerable number of monographs and dissertations on front and army operations and on the use of the service arms and branches of the armed forces. We should consider as a pleasing fact the appearance of such works as KPSS -- vdokhovitel' i organizator pobed sovetskogo naroda i yego Vooruzhennykh Sil v Velikoy Otechestvennoy voyne (The CPSU -- Inspirer and Organizer of the Victories of the Soviet People and its Armed Forces in the Great Patriotic War), Marksizmleninizm o voyne i armii (Marxism-Leninism On the War and the Army), KPSS -- rukovoditel' i vospitatel' Krasnoy Armii (The CPSU -- Leader and Educator of the Red Army).

The decision of the CC CPSU on the publication of the six volume work Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuza

1941-1945 gg. (History of the Great Patriotic War of the Soviet Union 1941-1945) was an event of enormous importance. The Division of History of the Great Patriotic War of the Institute of Marxism-Leninism under the CC CPSU has already developed and issued five volumes of this fundamental work. All of them received the acclaim of wide circles of readers both within our country and abroad.

The depth and objectivity of the research of problems taken up in this work have permitted making a new, significant and serious step in the study and generalization of the rich experience of the Great Patriotic War. On the basis of numerous documentary materials it reveals with sufficient cogency the leading role of the Communist Party in the victorious outcome of the past war, the indestructible unity of party and people, the indisputable supremacy of the socialist order over the capitalistic, and the heroism and courage of the Soviet people and its Armed Forces. Events of the Great Patriotic War have been placed in their true meaning, with the surmounting of everything superficial stemming from the personality cult of Stalin.

Another pleasing fact is the organization of the Voyenno-istoricheskii zhurnal (Military Historical Journal), established by the decision of the CC of our party. In spite of its youth it has occupied a worthy place in the ideological life of the Armed Forces of the USSR and has already succeeded in raising many important and interesting problems of military history.

The main goal of these measures taken by the party is to activate to the maximum military historical work, to instill in it genuine creativity, to raise it to the level of contemporary tasks and to make everything of value from the accumulated combat experience of the Soviet Armed Forces the property of the troops. Propaganda of the heroic past of our people and its army has an important place in all this. Military historical work is now one of the effective means of strengthening the defensive capability of this socialist government and to raise the combat readiness of the Soviet Army.

An important part in this regard was played by the order of the Minister of Defense of the USSR No 171 of 5 July 1962, and also the "Instructions on Military Historical Work in the Armed Forces," which was placed into effect by him.

These documents put forth the basic tasks and forms of military historical work and determine the system of guiding it in all elements of the Armed Forces. It is stressed in the order that the organization and leadership of military historical work, and also personal participation in it is the official duty of commanders and chiefs. This requirement once more indicates the significance and importance of military historical work.

The order of the Minister of Defense of the USSR and the Instructions open before military historians the broadest field of activity. This is borne out by one list of questions on which we must concentrate our chief attention. Military historical work should solve such important tasks as: the further deep research of the theoretical military legacy of V. I. Lenin; demonstration of the role of the CPSU in the building and leadership of the Armed Forces; the ultimate elimination in the development of military history of the deficiencies stemming from the personality cult of Stalin; investigation of the liberation mission of the Soviet Armed Forces during the Great Patriotic War; a study of the experience of the Second World War, of the development of the Armed Forces and the military art of the USSR and the chief capitalist countries after the Second World War; propaganda of the heroic exploits of Soviet soldiers during the Civil and Great Patriotic Wars; the decisive struggle with dogmatism and subjectivism; and the unmasking of the bourgeois falsifiers of military history.

It is quite evident that the solution of such responsible tasks demands a fundamental improvement of the very organization of military historical work and the development of effective forms for its conduct. Here then is the development of military historical monographs, textbooks, training aids, articles and their review. Here then is the conduct of military historical conferences, meetings, seminars and assemblies of military historians. It is best to have more frequent critiques and discussions of works published on military history. There must also be broad publicity given to the selection of topics and defense of dissertations on military historical subjects and with this aim to regularly publish them in the periodic press in order to attract wide public circles to a discussion of them. Museums and archives can have a considerable contribution to military historical work. It is important only that they not be transformed into ordinary repositories of documents, but that they be the basis for deep research and become genuine scientific centers. It is known that it is in the archives that many of the most valuable documents have been found from the legacy of classics of Marxist-Leninist science. There is no doubt at all that in our archives and museums there have still not been raised all the layers of the heroic past of the socialist Motherland. But they must be raised.

In this regard much can be offered by excursions and trips to places where military history was made. Meetings with witnesses and participants of past encounters with the enemy, close ties by military historians with civilian historical establishments and organizations -- all this undoubtedly will enrich Soviet historical science and will even more clearly illuminate the grandeur and significance of the struggle of the Soviet people for its freedom and independence.

One must approach military historical work with a living creative fire in the heart. As with all ideological activity, it does not countenance routine, stagnation and formalism. It is necessary that officers, generals and admirals, commanders, staffs and political organs continually seek new flexible means for activating scientific investigations and select such forms of military historical work which correspond to the greatest degree with the specialty of the chest, soyedineniye and installation and with the level of theoretical training of the personnel. But independent of the selected forms and methods, the chief and sole principle for all remains the high ideal political level of activities. They must be permeated by genuine party passion.

The status of military historical work depends to a great degree on the training of the cadres of military historians themselves. There are many ways to improve it, and one of them is by improving the system of training of scientific workers through graduate work. It is here that people acquire the deep systematized knowledge and themselves conduct scientific work. But this is not the only way. It is important only to select for work in the field of military history people who are creatively endowed, energetic, and who love such work. We must naturally rely on young cadres.

As is known, the officer cadres receive the fundamentals of military historical knowledge in military schools and academies. But this is only the first step in their education in this area. Further improvement in training and deeper study of the questions of military history should be conducted throughout the entire period of service of the officer in the Armed Forces. Consequently success can be attained only with the broad development of military historical work in the army and navy, and in the main and central administrations of the Ministry of Defense. Classes in the system of officer training and political classes must of course play first violin in this regard. Questions of military history should occupy a worthy spot here.

But this is by far not all. Lectures and reports, conferences and discussion of military historical works which are published for the first time can serve as good assistance for people studying military history. All this requires improvement of the work of agitation-propaganda collectives. Independent study by officers and generals of the history of wars and military art is worthy of every kind of encouragement.

Very responsible tasks also fall upon the Voyenno-istoricheskii zhurnal. I wish to recommend that the editors publish more articles of a generalized nature on the Second World War, to more deeply analyze individual operations and campaigns, to devote more

attention to questions of tactics, operational art and strategy, and in this respect to an illumination of the experience of the use of arms of service and branches of the Armed Forces. Further improvement is required by propaganda of exploits of Soviet troops and successes of party political work in the fronts. These tasks can be solved only in the case where the editors more widely attract to the work the public, the war veterans, those who with their blood wrote the heroic history of the Motherland. An important task of the journal is in broadening the aktiv of authors.

While developing in every way military historical work, we must struggle against false conceptions existing in places.

The facts are as follows. After the end of the Great Patriotic War, approximately in 1953, the experience gained by the Soviet Armed Forces in the struggle against Hitler Germany was a decisive factor in the combat training of troops. This is natural, inasmuch as the Army and Navy relied essentially on the same technical basis as during wartime, and military art in past conflicts reached the height of its development. However subsequently, under the influence of the military technical improvement of our Armed Forces on a principally new basis, the introduction of atomic and thermonuclear weapons and rocket technology into all arms and branches of service, changes in the organizational structure and, as a consequence of all this, the development of new ways of conducting armed conflict on a strategic, operational and tactical scale by a number of generals, admirals and officers, there arose the tendency for an underevaluation of the experience of the past war. This is a false and fundamentally erroneous opinion.

Of course the appearance of new means of armed conflict always has introduced great changes in military affairs. This is an objective principle. But the appearance of new means of conflict does not diminish the significance of military history. Only those who have insufficiently understood the laws of Marxist dialectics can maintain the delusion that the new stage in the development of the Soviet Armed Forces strikes out everything past in the field of military theory and practice. A deep knowledge of military history and the principles of development of military art are, as before, important and necessary. Minister of Defense of the USSR Marshal of the Soviet Union R. Ya. Malinovskiy writes that Soviet military doctrine is directed not at the past, but to the future, without at the same time turning away from the valuable experience of past wars, and that the combat experience acquired in the war against fascism has even now not lost its meaning ([Note]: R. Ya. Malinovskiy, Editel'no stoyat' na strazhe mira (Vigilant in the Defense of Peace), Military Publishing House, 1962, pages 18, 22.).

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There is another aspect. We cannot mechanically transfer the experience of past wars into the modern theory and practice of military affairs, since, being the source of military experience, military history nevertheless cannot give ready answers to all questions put forth by the present time. Here it is impossible not to turn to the advice of the great Lenin. Vladimir Il'ich Lenin cautioned against an uncritical attitude toward the past, and taught the party to base its activity primarily on an analysis of the specific situation. Today the words of V. I. Lenin sound especially real: "...We must understand the indisputable truth that the Marxist must consider life itself and the exact facts of reality, rather than continue to hold to the theory of yesterday, which, like any theory, in the best instance only notes that which is fundamental and common, and only approaches encompassing the complexity of life" (Sochineniya (Works), vol. 24, page 26). Vladimir Il'ich taught us "not to be satisfied with that ability which developed in us our former experience, but to go directly forward, to achieve more without fail, and to go directly from easier tasks to more difficult tasks. Without this no progress is possible at all..." (Sochineniya, vol. 28, page 172).

It follows from this wise statement that military historical work should in no way be at the mercy of dead schemes. The study of historical experience must be conducted within the plan of use of those of its aspects which have not lost practical value under present conditions, which can be useful in the future, and which facilitate the search for new forms and ways of armed conflict. We must also be more bold in revealing the unsuccessful experience of operations conducted in the Great Patriotic War in order to avoid a repetition of the errors.

As has already been stated, military historical work in the Armed Forces has in recent years somewhat revived and has had indubitable successes. However it still has major deficiencies. Let us examine the main ones.

A number of districts still take a formal approach in assigning officers for military historical work. Many of them are not adapted to such work and therefore it weighs on them. Others lack the necessary experience, and the command and staff elements do not devote the necessary attention to their training. Thus an important matter is left to go on its own. We cannot be reconciled to such a situation. We must eliminate this shortcoming as quickly as possible. We must raise in every way possible the level of training of officers occupied with military historical work. There are many forms of work with officers -- assemblies, instructional conferences, the popularization of advanced experience in the periodic military press, etc.

In places the planning for military historical work is done with insufficient thought. Plans in many instances do not encompass the entire range of questions which must be raised. The other extreme is the clearly unrealistic deadline for fulfilling a particular job. Let us assume that a treatment of the history of soyedineniya and ob'yedineniya in some districts is planned to be complete in October-November, but in some places they have moved up the target dates and have decided to complete it by June 1963. One would think that such haste is hardly possible without detriment to the ideal and scientific level of treatment.

There are also errors in the selection of the forms of military historical work. In some districts the study and dissemination of the experience of the Great Patriotic and the Second World War is planned to be conducted only by the lecture method. It may be asked, why ignore other tested methods such as seminars, military historical trips, conferences and book discussions? There can be only one answer. The leaders of this important affair wish to select the easier path without thinking of the results. This then is formalism.

We should also direct our attention to another thing. The party requires that leaders and commanders of industry take a more active part in ideological and propaganda work. Persons having a rich practical and party-economic experience can teach much to the young cadres. This requirement of the party also applies wholly to the Armed Forces. This is why classes on military historical subjects must have the active participation of major commanders, commanders and chiefs of staff of ob'yedineniya, soyedineniya and chasty, and generals and officers who are well trained in questions of military history, especially participants of the events in question.

One of the definite requirements in conducting military historical work in the troop units must be the close union of the studied material with plans of combat and political training of chasty and soyedineniya. In this regard the methods of using the experience of past wars in the training of officers and generals of the Headquarters of the Leningrad Military District deserve wide dissemination. Here at one of the conferences Chief of Staff of the District Lt Gen A. M. Parshikov gave a well prepared report "Lessons of the Initial Period of the Great Patriotic War and the Increase in the Constant Combat Readiness of Troops Under Present Conditions." The experience of operations conducted in the Northwestern Theater during the Civil, Soviet-Finnish and Great Patriotic wars was widely used in reports at district conferences dedicated to the development of the theory of military art under present conditions. In the near future this experience will be the basis

For a special scientific theoretical conference. It is also planned to read a number of lectures and reports dedicated to operations in the Northwestern Theater of Military Operations.

Some experience in the conduct of military historical conferences has been accumulated in the troops. In the North Caucasus Military District, for example, there was a good conference held on the subject "Liberation of Rostov-na-Donu and the Rostovskaya Oblast from the Fascist German Occupation." What guaranteed its success? Above all it was the fact that its organization and conduct was given serious attention on the part of the command, staff and political organs of the district and troops.

It should be noted as a positive fact that the conference was favored with the active participation of the party and scientific public of the city and oblast. The party city committee, Soviet Party school, State University, oblast and party archives, Museum of Kray Studies, Society for Dissemination of Political and Scientific Knowledge, and military scientific societies under the garrison officers' clubs gave the command much help in the study of combat operations of Soviet troops in the liberation of Rostov-na-Donu and Rostovskaya Oblast.

All this enlivened the work of the conference and made it of a genuinely mass nature. Over 270 persons took part in the military historical conference.

There was just as active a conference in the Leningrad Military District on the subject "Twentieth Anniversary of the Break-through of the Blockade of Leningrad." Around 200 persons took part in it and, which is very important, it included many participants of the heroic defense of the cradle of revolution.

There have recently been more and more officers and generals who have begun the preparation of dissertations on military historical subjects. In 1962, for example, in the ground troops alone over 30 persons announced their desire to take up a scientific work and prepare a dissertation for the competition for the scientific degrees of candidate of historical sciences.

This is a pleasing fact. But as mentioned above, the works of those preparing the dissertations are not widely enough popularized by us. This leads to a certain anonymity in the work of persons who decide to devote their lives to military historical research. Under these conditions it is possible to have instances of parallel development of topics, unnecessary repetitions and sometimes even a subjective approach to particular questions.

The same thing can be said about the work of military memoir writers. The Military Publishing House has recently published many interesting remembrances of participants of the war. There is a quite understandable interest in this on the part of broad circles of readers. Unfortunately at times from the pen of the memoir writers come books which are too superficial, and sometimes even have serious deficiencies. This could not happen if we would more frequently engage in criticism of manuscripts of books before publication. Former compatriots, fellow employees and persons engaged in military historical work could undoubtedly assist the authors in making their necessary and important work more weighty and in precluding the appearance of annoying errors.

It is even worse when the author himself does not wish to listen to the voice of the public and relies solely on his own experience and erudition. It happens that the slightest remarks of critics after publication of the book are taken painfully by the authors. But one must understand that criticism is for the good of the creator of the work himself. This is friendly and comradely criticism, and its correct perception will be of use to matters in general. Ambition has no place here.

The 22nd CPSU Congress pointed out that the necessity for intensifying propaganda of the heroic traditions of the struggle of the Soviet people and its Armed Forces against foreign usurpers was the most important means for education of the personnel of the Soviet Army and Navy. It was noted in the Program of the Communist Party that the party devotes unremitting attention to instilling in troops the spirit of courage, daring, heroism and military cooperation with armies of socialist countries and the readiness to defend their Motherland at any moment. This task was assigned with even greater sharpness in the decision of the June Plenum of the CC CPSU. Officials of the military historical front have unlimited opportunities to accomplish this. Lectures, reports, discussions, political classes, excursions to battlefields, monuments and heroes' graves, visits to exhibits and museums, assemblies, parties, film festivals dedicated to the jubilee dates of the Civil and Great Patriotic wars, celebrations by chasti and soyedineniya, meetings with participants of battles, propaganda of the heroics over the local broadcast network and in the periodic press -- there are many means for demonstrating the immortal deeds of the fathers and mothers of the present generation!

A great part in the propaganda of the heroic traditions belongs to the rooms of combat glory set up in chasti and soyedineniya, in post and district officers' clubs. With a loving attitude for their formulation and the selection of historical materials, they can become genuine centers for military knowledge, graphic

and profitable means of propaganda of military traditions and for instilling in personnel high moral military qualities. This can be judged by the popularity enjoyed by the rooms of combat glory in officers' clubs of the Stavropol' garrison, in the Kantemirovskaya Division, and in the motorized rifle regiment commanded by Gds Col I. A. Ivanov (LVO [Leningradskiy voyennyi okrug; Leningrad Military District])). Their example deserves emulation.

The scientific histories of chast, soyedineniya and ob'yedineniya can serve as great help in educating personnel in military traditions. In a speech of 19 September 1940 entitled "Role and tasks of political officials of the Red Army and Navy" M. I. Kalinin noted: "...the combat traditions of military chast are poorly cultivated by us, although this is a serious factor of education. They say that in wartime a regiment or a division can quickly restore its power after any battle if it just maintains within itself a framework embodying highly developed combat traditions of the chast. Therefore these things must be arranged properly, not sloppily, but in an organized manner, so that each new arrival in the regiment knows not only its number, but its entire combat history, all its heroes and combat decorations, all its victories in competitions and maneuvers, so that he is proud of his regiment and defends its honor everywhere. In this regard it would not be bad for the regiments to have in the libraries their written history" ([Note]: M. I. Kalinin, O kommunisticheskom vospitanii i voinskom dolge (On Communist Education and Military Duty), Military Publishing House, 1962, page 427.).

So it was put in 1940. Since then there have occurred events of truly worldwide historical significance in the life of the Armed Forces -- these are our victories in the Great Patriotic War over fascist Germany and the rout of imperialist Japan. Every chast now has rich military traditions.

We should note that many chast, ships, soyedineniya and ob'yedineniya already have written histories. In the Leningrad Military District, for example, nine books have been published. Similar materials have also been collected elsewhere. However this is only a beginning and the main work is still ahead.

We note that this is quite complicated work and naturally there are serious gaps in it. In a number of instances the chast history is replaced by a description of only the combat record, and sometimes it is reduced to a description of isolated frontline episodes.

All this stems, in our opinion, from a lack of qualified persons within the chast capable of taking in at a glance a large chain

of events and forcing the paper to speak convincingly and passionately. Therefore I wish to recommend to commanders, political workers and propagandists of the chasty and soyedineniya to be more bold in applying public principles in this work. They can receive much help from local writers, officers and generals in the reserve, officials of the military and party press and artists. It is important to properly use reserves of military patronage work.

But here there is also a need for help from higher up. I believe that the Military Scientific Administration of the General Staff together with military historical groups of the main staffs of branches of the armed forces and the Military Publishing House should develop necessary recommendations to assist those who are writing the history of their native chasty and soyedineniya, and to establish closer ties with them.

The amateur film studios which are now widespread in the army and navy can do much for the propaganda of combat traditions of chasty and soyedineniya. A good film on the combat record of the chasty, for example, has been made in the same Guards motorized rifle regiment (LV0). We could also name many other chasty and soyedineniya where the political organs and cultural enlightenment establishments have achieved notable successes in this matter. But amateur film-making in the Armed Forces is still making its first steps and is in special need of help and support. We must remember that there is a big future for this form of ideological education.

Finally, several words on the work of military historical sections of the voluntary military scientific societies set up in officers' clubs and military commissariats. This is a very important element in the entire system of military historical work. The majority of members of the societies are persons who have passed the test of war, i.e. living history itself. Officers, generals and admirals joined by one common affair and one noble goal of restoring the heroic past of our Motherland, can be of inestimable use in this regard.

The command element of many districts is quite correct in encouraging in every way the work of the voluntary military scientific societies. As a rule, along with the officers and generals of the reserve and retired, there are included in the societies representatives of the district staffs, who assist in setting up the work in close relationship with the present tasks being solved by the Armed Forces of the USSR. They also inform the command elements of the districts on the needs and requirements of the people who are pushing military science forward. Two or three times a year district military councils hear reports and information on the status of military historical work in the societies.

Such concern for the voluntary societies of war veterans bears good fruit. We can cite the following examples. The military scientific society under the Novosibirsk District Officers' Club undertook with the help of the command and local party and soviet organs a large-scale and interesting trip to places connected with the destruction of the bands of Kolchak in Siberia. An enormous amount of historical material was obtained which was a good contribution to the reconstruction of the history of the struggle of Soviet partisans and the young Red Army with foreign interveners and internal counterrevolution.

Or let us take the military scientific society under the Tallin Officers' Club. Five military historical conferences have been held here in two years. In the November 1962 conference alone, on the subject "The Liberation of Soviet Estonia," 1100 persons took part. The Institute of Party History under the CC CP Estonia, the Institute of History of the ESSR Academy of Sciences, and military museums took part in preparation for and conduct of the conferences.

Minister of Defense of the USSR Mar SU R. Ya Malinovskiy in Order No 41 of 20 February 1963 noted the great and fruitful work of generals, admirals and officers of the reserve and in retirement. One hundred two persons received thanks, and 25 generals and officers were awarded valuable gifts. These included the Chairman of the VNO [voyenno-nauchnoye obshchestvo; military scientific society] under the Tallin Officers' Club Maj Gen Arty (Res) T. M. Zubov, Chairman of the VNO under the Leningrad Officers' Club Maj Gen (Res) Ye. I. Shishkin and many others.

This is just further proof that we attach such great significance to the work of military scientific societies. However they still do not everywhere receive the necessary assistance and cooperation on the part of military district staffs, and the main staffs of branches of the armed forces do not exercise control over the work of the societies to the degree required by the Minister of Defense in Order No 285.

People called upon to organize and accomplish military scientific work must do much more. They must see that this important section of the ideological front occupies the front line in communist education of the Soviet people and its soldiers.

In the present stage there is great significance acquired by the struggle with bourgeois falsifiers of the history of the Second World War and the Great Patriotic War. The ideologists of the bourgeoisie, and primarily the ideologists of American imperialism, have begun a fierce struggle against the USSR and the countries of the

entire socialist union. They are attempting to silence or in every way corrupt the facts and events of history. Book markets of the capitalist countries are filled with various works on the history of the Second World War, wherein the decisive role of the Soviet Union and its Armed Forces in the destruction of fascism is belittled and ridiculed in every possible way. This is done with completely defined goals. Bourgeois historians in the service of the imperialist bosses strive by any means to cloud the awareness of the peoples of the world, who see in the Soviet Army their saviour from the fascist plague. Moreover the foreign businessmen try to use history to create in the world public an incorrect understanding of the might of the Armed Forces of the USSR.

In a report at the jubilee session of the Supreme Soviet on 6 November 1957 Comrade N. S. Khrushchev said: "The Soviet people and its valiant Armed Forces took the main weight of the Second World War. They not only defended the freedom and independence of their Motherland, but also made a decisive contribution to the matter of saving mankind from the threat of fascist enslavement. Some people would like to silence or degrade the meaning of this victory. But no one will succeed in striking from the memory of the people and from history the great deed of the Soviet people! Not only our contemporaries, but also future generations will always hold sacred the memory of the heroic men who defeated the fascist hordes in mortal battles, and will honor the memory of those who saved a bright future for mankind."

The attempts of the falsifiers must receive a decisive repulse on the part of Soviet military historians. This struggle must be conducted systematically, in an offensive spirit, by means of incontrovertible facts and convincing documentary materials. It is this kind of struggle which the Communist Party demands of us, as do the interests of preservation of peace on earth and the blossoming of our socialist Motherland.

There is no doubt that Soviet military historians, inspired by the decisions of the 20th and 22nd Party Congresses and the June Plenum of the CC CPSU, will bend all efforts to see that military historical work in the Armed Forces becomes an effective factor in educating personnel in the spirit of Soviet patriotism and a means for the steady increase in the defensive capability and military might of the Soviet Union and all countries of the socialist camp. This is their sacred duty. They can do it.

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by Col I. Vorobyev

The abrupt rise in the role and significance of the maneuver of forces and means, which has become the most important condition for the successful conduct of combat actions, is one of the most essential changes which has taken place in recent years in the nature of operations and combat. The increase in maneuver in combat actions has been a proper consequence of the development of means of armed conflict. This is primarily the result of an immeasurable increase in firepower and troop mobility. While firepower affords the opportunity to deliver decisive destruction to the enemy in a short time, the increased mobility of forces ensures the rapid and effective use of the results of fire strikes for achievement of the objectives of the operation (battle) in a short period.

In speaking of the increasing role of maneuver in present day operations and battles, it is important to keep in mind the qualitative changes in its makeup and reasons for its conduct.

While in the past maneuver was understood basically to be "...the organized and rapid move of a certain grouping of forces... the objective being for them to occupy a more favorable position in relation to the enemy in order to strike a blow against him or to repulse his blow" ([Note]: Voyennaya Mysl' (Military Thought), No 3, 1955, page 35), now, in our opinion, the main thing in conducting a maneuver should be the striking of nuclear blows and the conduct of fire by conventional means, with their shift onto new objectives and targets in order to inflict a decisive defeat on the enemy (maneuver by fire); and the rapid advantage taken by troops of the results of these strikes with a transfer of forces onto the appropriate axes (maneuver of forces and means). Of course all this presupposes the creation of the best grouping of fire means and troops and the provision of a suitable position to accomplish the tasks of the operation (battle) by means of a close combination of fire and movement.

In other words, the principal changes in the objectives of maneuver are connected mainly with an increase in the destructive force of the means of warfare.

Under any conditions fire power plays the main and determining role in an operation (battle). Maneuver by fire is always conducted in close interworking and dependence with the maneuver of forces and means. This is why the efforts of troops should be primarily directed at the effective use of the results of fire strikes, and also at a maximum lowering of losses from enemy nuclear strikes.

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In this regard we now cannot get along without maneuver undertaken for the purpose of moving troops away from nuclear strikes, replacement of individual elements which have suffered heavy losses from nuclear weapons, and surmounting broad zones of radioactive contamination, destruction and inundation created as a result of the massive use of this weapon. In the course of an attack there will frequently arise the need of maneuver for the purpose of fighting and destroying isolated enemy groupings.

There is complete retention of value by maneuver for the purpose of a build-up of efforts and decisive exploitation of success by reinforcing troop groupings already operating with fresh forces. It will sometimes be required to accomplish a maneuver in order to shift efforts to another axis, including one which has been newly opened. The role of maneuver by air sharply rises in all instances under conditions of a dynamic, rapidly changing situation and transient combat operations.

The purpose of maneuver cannot be limited to striking the enemy with troops. This would signify a reduction of the essence of maneuver to only the regrouping of forces and means preceding the strike, while maneuver is also accomplished in the course of striking the blow. Moreover, it is in the course of the blow that the greatest opportunities are created for maneuver operations, when the opposing enemy grouping receives decisive destructive fire, especially nuclear bursts, and there is also disruption of his fire control and the coordination of his forces. In the force of this, maneuver is closely interwoven with attack and continually accompanies it. Herein lies a very important feature of modern maneuver -- its continuity of accomplishment in the course of the operation and battle from the very beginning to the end of their conduct.

Let us examine maneuver in an offensive operation. In the past the entire process of attack was somehow broken down into two phases -- the breakthrough and troop operations in the depth of the enemy defenses. Depending on the conditions of accomplishment of the maneuver these phases differed sharply from one another. The breakthrough, for example, was characterized by a high degree of methodicalness, with the troops forced to operate in dense, compact formations. They primarily made frontal attacks, inasmuch as the accomplishment of a maneuver while overcoming a continuous, densely defended enemy defense was hampered. However in operations in the depths of the defense the opportunities for maneuver sharply increased. Taking advantage of gaps in the enemy formations, troops made wide use of envelopments, turning movements and encircling maneuvers. On the whole, operations in the depth of the enemy defense in accordance with the existing means of combat were sufficiently mobile.

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The development of the attack under present conditions presents a different picture. There will no longer be such a distinction in the accomplishment of maneuver at the beginning of an operation and in its conduct with the mass use by combatants of nuclear weapons under conditions where the defense has considerable gaps and breaks, and with the development of combat operations over a broad front and along individual axes. Attack begins and ends with maneuver. This does not mean, of course, that conditions for its accomplishment will always be identical. On axes where the defenders are more devastated by fire and also in the gaps and on exposed flanks there will naturally be a broad expanse created for maneuver operations. Along such axes the troops will be able to maneuver for the most part in march formations.

Conditions for maneuver can be different when combat operations must be conducted with active resistance by the defender, and also when surmounting obstacles, sectors of destruction and zones of radioactive contamination. Maneuver rates here will probably be lower, inasmuch as the maneuver itself is fraught with great difficulties and troops must accomplish it in deployed formations and in combat and approach march formations.

The significance of maneuver operations also increases in the defense. As the power and effectiveness of means of destruction increase, the defender strives more and more to accomplish his missions by active means of maneuver. A special role in the defense belongs to the maneuver of fire in connection with a sharp increase in the front of the defending troops. It can be used for carrying out a powerful counterpreparation in order to destroy the attack groupings of the enemy before they move into the attack.

Inasmuch as maneuver occupies an ever increasing place in the defense, the latter by its nature becomes a mobile defense. And in reality not one of the missions of the defense -- repulsing the attack of overwhelming enemy forces, destruction of his grouping which has wedged its way in, retention of positions and areas -- can now get along without maneuver. Here the maneuver is naturally subordinated to the common aim of the defense, especially if this aim provides for retaining important key areas of terrain and key positions. It is for this purpose that counterblows (counterattacks) are made, that there is regrouping of forces and means from some axes to others, and that there is replacement of troops which have suffered considerable losses from nuclear strikes, etc. Firmness of the troops is as before the most important quality of the defense, and is combined with the increased role and high activity of combat operations.

A change of the purposes and content of the maneuver inevitably leads to essential changes in the forms of its accomplishment.

In the past the basic forms of maneuver, as is known, were the turning movement and the envelopment. Wide and skillful conduct of decisive and bold envelopments and turning movements played an exceptionally important part in achievement of success both in offensive and in defensive operations of the past war.

There is no doubt that even now envelopments and turning movements as forms of maneuver retain their significance. However there are vastly greater opportunities which have opened up for their accomplishment. Moreover, these forms of maneuver alone do not exhaust all the diversity of maneuver operations. The envelopment and turning movement with blows to the flanks and rear of the enemy have of course a major significance and facilitate the most effective destruction of the enemy. Moreover the opportunity to decisively destroy the enemy with firepower, primarily nuclear, points out the wisdom of using frontal attacks under certain conditions. By permitting the successful destruction of the enemy without preliminary movement of forces and means requiring additional time, the division of the opposing grouping into segments, and the headlong development of the attack along the shortest axis into the depth, penetrations create favorable conditions for taking advantage of the results of fire effect and support high rates of troop movement and the economy of forces, means and time.

A penetration can under certain conditions seem more suitable and effective than, for example, an envelopment, inasmuch as the movement over great distances necessary for the envelopment is frequently carried out across unfavorable terrain, which lowers the rate of movement of the attacker and increases his vulnerability to nuclear attack.

The penetration is planned to be primarily used against gaps and breaks in the enemy operational (combat) formations. Therefore it must not be identified with a frontal attack. However in distinction to the turning movement, in which the troops strike with main forces against the enemy flanks or from the rear, the penetration provides for a rapid rush of troops along the shortest routes into the depth of the enemy disposition, the seizure of important objectives in the rear and battle with the enemy reserves. This does not rule out the influence on the enemy of a portion of the forces from the rear and the flanks for the purpose of "dissipating" his defense or for encirclement or blockade of isolated groupings.

It would be incorrect to contrast a penetration with maneuver. The maneuver of forces and means will frequently precede and will accompany the penetration. In its ideal nature the penetration is also a unique maneuver. The art of maneuver finds its expression in it in the wise selection of the direction of the main attack, in the

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creation of a suitable grouping of forces and means and in the timely build-up of efforts right up to the completion of the operation. The penetration best attains its result if it is combined with other forms of maneuver conducted by a portion of the forces.

Maneuver carried out by transferring troops by air has taken on ever greater significance under present conditions. This maneuver in an operation pursues very decisive goals and has a number of advantages over other forms. It provides for great flexibility, combat efficiency, rapidity and surprise. Maneuver by air permits troops in the shortest time to overcome great distances irregardless of the nature of the terrain and the degree of destruction and contamination by radioactive substances. In this regard maneuver by air is especially effective in overcoming large zones of destruction and contamination.

While in the past maneuver by air was limited chiefly to the shift of small podrazdeleniya and chasti primarily in the interests of airborne landings, under present conditions the capabilities of military transport aviation, including helicopters, permit the transfer of comparatively large troop groupings and large reserves of material means and cargoes over considerable distances. Such transfers can be carried out for the purpose of regrouping, for rapid replacement of troops which have suffered heavy losses from nuclear attack, and also for the shift of major efforts against other axes and for blows against the flanks and rear, etc.

There is no doubt that as the spatial scope of operations increases, and as the dynamics and transientness of combat operations and the development of military transport aviation increases, maneuver by air will occupy an ever greater place. Such maneuver is especially needed in mountainous theaters of military operations, over forest and swampy terrain, and also on coastal axes.

Unevenness in development of combat operations and the opportunity for a deep movement of troops to the rear and flanks of enemy groupings in combination with airborne landing operations lead to the appearance of such a new and decisive form of operation as a simultaneous combined attack from different directions. This attack can be used in an operation (battle) for the purpose of dismemberment, encirclement and destruction of isolated groupings. The skillful accomplishment of such an attack will lead to a rapid disorganization of enemy control and a disruption of the work of his rear. Such an attack can be looked upon as the result of a combination of various forms of maneuver or as a new variety of maneuver.

One of the new forms of maneuver called to life by the appearance of nuclear weapons is the shift in areas of troop disposition

and fire positions. Such a shift should, in our opinion, be done periodically, especially under a clear threat of enemy nuclear attack. The purpose of such a maneuver is the timely movement of troops away from the nuclear attack being prepared by the enemy, thus forcing him to deliver his blows against an empty area.

There could arise, even in preparations for an offensive operation, the necessity to shift the initial (and only) areas of troops preparing to attack from the move (if it appears that they have been detected by the enemy and that a mass nuclear strike is being prepared against them). In this instance the movement of troops can be carried out not only for the purpose of shifting them to alternate areas, but also for the purpose of beginning the attack prior to the appointed time.

Even the directions of attack could change in the course of an offensive operation for the purpose of protecting the troops from destruction. Constant direct contact with the enemy, high rates of movement, deep and rapid thrusts, very dynamic development of combat operations, -- all this hampers the defender in choosing objectives and lowers the effectiveness of his nuclear blows.

The need very frequently arises for carrying out a maneuver for the purpose of protecting troops from destruction by nuclear weapons in the defense, when the troops and their fire means are located for a rather prolonged period in the very same areas, thus creating favorable conditions for the attacker to discover objectives for destruction and to place nuclear strikes on them. Such a maneuver in the defense is usually carried out by a periodic shift in the disposition of reserves, control points, rocket launching positions, artillery fire positions, tanks and other fire means. This maneuver has a close relationship to the maneuver for the purpose of moving troops from terrain with radioactive contamination, and for overcoming and avoiding it.

Maneuver of fire has taken on special meaning. Its content has expanded, extending beyond tactical and even operational bounds. In distinction to the past, it primarily includes the maneuver of fire of rocket troops delivering nuclear fires, which gives it completely new qualities. While before the concentration or shift of fire over great distances was connected with a considerable regrouping of fire means and demanded the expenditure of much time, now the unprecedented increase in the range of fire means and the concentration of an enormous amount of energy in a nuclear blast allow destruction of the enemy in exceptionally short periods with great density and at practically any distance. These maneuver qualities are especially important under present conditions, when combat operations will simultaneously encompass vast territories and will be

characterized by rapid and abrupt changes in the positions of the combatants. Under conditions of intense and transient operations, new blows by rockets and aviation will frequently be the sole means in the hands of the commander by which he can without delay influence the development of events in the desired direction.

Maneuver of nuclear fires is the foundation of maneuver of fire. Its use is planned for solution of the most important tasks in the course of an operation and battle -- the rapid destruction of newly disclosed enemy groupings, of his nuclear delivery means and other very important objectives. Troop operations must be coordinated with maneuver of nuclear fires by purpose, time and place in order to make effective use of the results of the nuclear blows. We also see in this a difference from the past, when maneuver by fire was coordinated with the operations of troops and was subordinated to them.

Maneuver of nuclear fires can be conducted for inflicting massed, collective and individual blows. Maneuver for the purpose of inflicting massed nuclear blows provides for the destruction of several of the most important troop groupings and major strategic and operational objectives, whose destruction could have a decisive influence on the accomplishment of the missions of the operation. A mass blow is a combination of collective and individual nuclear blows against the most important axes over a relatively brief period of time.

Maneuver for the purpose of inflicting a collective nuclear blow is also undertaken to achieve major operational results. But in distinction to the massed blow, it seems to us, it is carried out simultaneously with several nuclear rounds against any one major objective (grouping of rocket means, troop concentrations, airfield or rocket base).

The individual nuclear strike is carried out with one nuclear round, including one of large size, against an individual target (objective).

The greatest effect is naturally achieved by massed nuclear strikes which, in our opinion, is the chief method for use of nuclear weapons in an operation. An unexpected and stunning blow by a large quantity of nuclear weapons is capable in a short time of having a decisive influence on the course of the operation, on rapidly and abruptly changing the ratio of forces of the combatants, disorganizing control, paralyzing the work of the rear, calling forth mass panic and, in the final analysis, depriving a major grouping of enemy troops of combat effectiveness. However the effectiveness of such a blow is in direct relationship not only to the quantity and

yield of the nuclear weapons used on a particular sector of the front, but also on the accuracy of their delivery.

There is great difficulty, however, in discovering objectives for several nuclear blows with a rapid and abrupt change in the situation and in the presence of primarily mobile, small-size objectives. In this regard there will also be great difficulty in preparing for a maneuver for the purpose of delivering a massed nuclear blow. Such a maneuver will require a good organization of intelligence, skilled placement of the means of nuclear delivery and well coordinated information. All this becomes possible only through the broad use for purposes of preparation and support of the maneuver of radioelectronic means and the wide automation and mechanization of processes of fire control.

In analyzing the changes in content of maneuver by fire, it is necessary to note that in the past the main objectives for concentration of fire efforts were troop concentrations. The effectiveness of fires was mainly determined by the quantity and scale of losses to personnel, since on this depended the combat effectiveness of soyedineniya and chasti, and consequently the success of the operation (battle). The situation has now changed. Fires must be directed primarily at destruction of the fire means, and above all the means of nuclear delivery: guided and free rockets, rocket-carrying aviation, nuclear artillery, and also supply bases for nuclear ammunition and special fuel. Only destruction of the main fire means fundamentally disrupts the combat power of troops and the system of fire, control and coordination of operational and tactical groupings, and creates conditions for rapid achievement of success in operation and battle.

The necessity for the primary destruction of the most important fire means of the opposing enemy grouping changes the nature of fire maneuver and the methods of its accomplishment in operation and battle. While before fire maneuver was usually accomplished by means of a successive shift of fire from front to rear, now the destruction by fire will evidently begin from distant objectives and will approach and build up from rear to front, simultaneously destroying the enemy in his entire depth.

This situation can be most graphically illustrated by an example of an offensive operation. The basic means for destruction of the enemy by fire during the past war was, as is known, artillery. Possessing a relatively short range of fire and small fire power, it usually carried out a consecutive neutralization of enemy defenses concentrating the greatest fire on nearby targets which directly hindered the movement of tanks and infantry. Fire was shifted deeper as soon as conditions were established for a successful attack. This

introduced a definite methodism and sequence in the operations of the attacking troops, especially in overcoming a more densely occupied defense position and in breaking through.

Now the destruction of the defender by fire will be accomplished in another manner. Inasmuch as long range delivery means of the defender located in the depth of defense and representing the foundation of its power will primarily be the greatest danger to shock groupings moving from the depth and designated for the move into the attack, then the fire destruction of the defender will most frequently begin with the destruction of these means. As the troops move closer to the FEBA, the short-range fire delivery means will also be destroyed at an increasing rate.

Under present conditions it is characteristic for fire maneuver to have a great inequality in concentration of fire at the front and in the depths. Such a concentration would evidently have application on separate axes. This will require great flexibility in fire control. In particular, in our opinion, there will no longer be a need to create ponderous artillery groups, as was previously done. In operations along individual axes the fire maneuver can be most quickly and easily accomplished in the case where necessary independence of fire support is provided each grouping of troops, which is especially important in a tactical element.

There is great significance in supporting successful troop combat operations by the skillfully organized and thoroughly planned maneuver of fire of antiaircraft means. The broad application of various means of air attack and an increased dependence of success of combat operations of ground forces on the results of the struggle with the air enemy have an enormous effect on the content and nature of maneuver of PVO [protivovozdushnaya oborona; air defense] means as a whole. While in the past antiaircraft facilities in the course of an operation (battle) covered small troop groupings and separate objectives, now the maneuver of these means must be organized in such a fashion that there is achieved a zonal coverage of troops on an operational scale. Such coverage must be reliable and continuous. Continuity, as one of the basic requirements for the maneuver, stems from the possible nature of operations of the air enemy. In the past war the appearance of aviation over the battlefield and its operations as a rule bore an episodic nature. Now the influence of means of air attack against troops will be felt almost constantly. In addition we must consider that the strikes of even small groups and individual aircraft using nuclear bombs and rockets will present a great danger for troops. Therefore the maneuver of antiaircraft fire should be accomplished with exceptional rapidity, with a skilled grouping of these means along routes of approach and with the presence of a single automated control system.

The role of maneuver under present conditions has so increased that it permeates the entire content of combat operations. This situation should also obviously be reflected in the decision of the major commander (or other commander). For example, in planning an operation one can hardly get by without a determination of the goals, nature of the maneuver and the means of its accomplishment. Moreover, in our opinion, the determination of the nature of maneuver of fire and troops together with the selection of axes and objectives for nuclear and air strikes, and also the axes of troop operations and their missions, will become the basis of the decision.

While in the past the selection of the axes of concentration of the main troop efforts occupied the main place in the decision, now this is no longer sufficient. Let us take as an example a defensive operation. During the past war the basis of the decision for the defense was the successful choice of terrain, the occupation of which governed the stability of the entire system of defense. As a rule a large portion of forces and means of the defending forces were concentrated to hold such areas. Thus, the 64th Rifle Corps, defending in the region of Lake Balaton in March 1945, occupied a defense zone approximately 30 km wide and up to 17-20 km deep. However it concentrated its main efforts on the central sector: up to 70% of all forces and means of the Corps were situated on a front 5-7 km long. A similar concentration of forces was noted in the 7th Guards Army, defending near Kursk in July 1943.

With this situation the forces and means assigned for holding key regions of the defended area were situated immediately within these regions, with the mission of holding them no matter what. Maneuver of forces and means was wholly subordinated to this main mission and was accomplished either for the purpose of a quantitative strengthening of the defending troops or for conducting counterblows (counterattacks) to restore lost positions, i.e. the maneuver in its goals did not go beyond the solution of particular problems of the defense.

These problems are solved in another way under present conditions. Key points have an attraction not only for the defender, but also for the attacker. With the concentration of major defense forces at these points they will undoubtedly become prime objectives for use of nuclear weapons. To avoid this the defender is forced to disperse his forces widely along the front and in depth, occupying important strong points with only a portion of the forces and means allotted for holding them. However for inflicting decisive destruction on the enemy in these regions he prepares, on the one hand, maneuver by fire and on the other, maneuver of forces and means, chiefly by means of second echelons and reserves in the depths. Here the sharp increase in range of modern fire means will indubi-

tably facilitate solution of the problem of fire maneuver.

Thus the widest maneuver of all forms is accomplished, while firmly maintaining a hold on positions (zones) in separate regions in the course of a defensive operation. On the strength of this the determination of the best ways to accomplish a maneuver occupies an important spot in the decision for the defense. In particular, the decision concerning maneuver should, in our opinion, include:

- regions for the concentration of fire of all forms and primarily nuclear means for the purpose of dealing a decisive blow to the enemy (regions of fire destruction);

- maneuver for the purpose of protecting troops from destruction by nuclear weapons and eliminating aftereffects of an enemy nuclear attack;

- maneuver for the purpose of replacing or reinforcing defending troops on a particular axis;

- maneuver for the purpose of making counterblows (counterattacks) immediately following nuclear strikes.

The determination of maneuver is important to an even greater degree in the decision for the attack. For example, the maneuver of forces and means can, in our opinion, be carried out not only in the course of an operation which has begun, but also before the troops take the offensive: for the purpose of moving troops away from nuclear strikes; in the course of moving troops to attack from the move; for the purpose of going around zones of radioactive contamination and destruction; to replace troop groupings which have suffered heavy losses from nuclear strikes by the defender, etc.

In the course of the attack it is important to provide for maneuver to take advantage of unoccupied and weakly occupied gaps and breaks appearing in the operational (combat) formations of the defender, and also for a rapid transfer of efforts to other axes. In our opinion, in the attack the broadest use should be made of maneuver for the purpose of moving to the rear of enemy groupings and striking from different directions and, in addition, maneuver for the purpose of isolating and destroying them. Deep, splitting strikes against the enemy simultaneously along a broad front along a number of axes by strong, highly mobile troop groupings are highly effective for dismemberment of the defense and for taking rapid advantage of the results of nuclear strikes.

The basis for maneuver in a meeting engagement (battle) should be the attempt to quickly break up enemy columns and to destroy them

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separately by decisive action. The forms of maneuver can be varied, depending on the situation. One of the most effective forms is, in coordination with airborne landings, a combined blow to the flank and rear of the enemy, simultaneously fixing him with a portion of forces from the front. Under favorable conditions, for example when the enemy grouping can reliably be destroyed by fire, and also with the presence of difficult terrain on the flanks, it is suitable to carry out a penetration for the purpose of a final destruction of the grouping by cutting it into pieces and providing for the development of success in the depths. Maneuver in a meeting engagement (battle) can also take the form of a double envelopment in conjunction with a simultaneous penetration. In all instances it is important to forestall the enemy in making fire strikes, in seizing favorable positions, in deploying the main forces and in inflicting a headlong and unexpected blow.

Under any conditions the maneuver of nuclear fires, of non-nuclear fires, and also of forces and means should be conducted opportunely and rapidly, secretly if possible, in order to preserve the combat capability of forces and means and to ensure successful fulfillment of the planned mission in the operation (battle).

These, in our opinion, are the most important changes which have taken place in the nature and goals of modern maneuver as a result of the use of new means of warfare.

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by Engr-Lt Col Yu. Gusev

The term "operations research" arose during the Second World War. Its content, however, began to be determined considerably earlier. Even in prewar times Soviet specialists successfully solved the problem of the best scheme of aircraft armament. It was thanks to these investigations that both cannons and rockets appeared on our planes at a time when foreign machines were only equipped with machine guns. During the Second World War the participants of the anti-Hilter coalition spent much effort in determining the optimum composition of sea convoys, on developing the best variation of PV0 organization, on the most effective use of radar stations, etc.

The meaning of the term "operations research" greatly expanded in postwar times. In addition to combat operations of the past war, many aspects of public life began to be subjected to research. "Operation" is now understood to mean any organizable activity of people, and "research" -- scientifically based recommendations for making rational decisions on the most varied questions.

However in the West operations research bears as before a clear military leaning. This is especially characteristic for countries belonging to the North Atlantic bloc. In the past ten years its Headquarters has conducted a number of conferences at which the military plans of NATO were subjected to detailed analysis. Moreover, the scale of the discussion constantly grew. While a total of 30 representatives of four countries took part in the work of the first conference (in 1953 in Ottawa), by the third one (in November of 1956) there were over 120 delegates of all NATO countries. In less than half a year (in April 1957) the next new conference gathered in Paris to review the work accomplished, to discuss the results and to plan for the future. The materials of the Paris conference, then, form the content of the book being reviewed, which was published last year in the Russian translation ([Note]: Operations Research in Practice. Materials of the NATO Conference, Translated from the English and French, Military Publishing House, 1962, 320 pages.). An analysis of the scientific reports, statements and speeches in the discussions contained in it permit the isolation of four fundamental problems which were discussed at the conference: operations research as a science; assignment of tasks for research and the use of results obtained; the system of organization for operations research and its cadres; and the further direction of work in operations research in the NATO countries.

Let us see how these problems are treated by western (NATO) specialists.

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ence participants took as the basis the formulation that "operations research is the use of the scientific method for providing executive organs with a quantitative basis for decisions made by them in the process of control" (page ** [number illegible]). This was frequently clarified in speeches: "...the purpose of operations research, which is a science doubly applied, consists of the scientific proof of decisions" (page 190). [One word illegible] "operations research can be [one word illegible] by science in decisions" (page 224).

Judging by these statements, operations research has been acknowledged by science. It would have been natural to expect the nature of its content to be: the subject being studied, goals and tasks, methodology, factual material and generalizations made on its basis (objective laws, special theories, regular relationships). However this did not appear in any report, and it could not have, for the bourgeois scientists up until now have demonstratively attempted to ignore dialectic materialism, although in their scientific work spontaneous use is made of the methods of materialistic dialectics. In summary, in achieving practical results they are frequently not in a condition to systematize them. The symposium being reviewed is one more proof of this. The authors of the reports and speeches intuitively feel that they are dealing with a genuine social science, but they cannot place everything into a harmonious system.

From the multitude of various materials in the symposium it is easy to see that the main goal of operations research is to assist the leaders (commanders, staffs, installations) in control, and the main task is research work in the interests of perspective planning. But even these important concepts are treated differently: goals are identified with tasks and military terminology is mixed with commercial terms. Thus some affirm that operations research was born during the Second World War as a need to extract "a maximum effect from resources available" (page 19). In another place it is stressed that "both in the military and civilian fields the task of operations research is the union of elements, the judgement of which is usually based only on common sense, into a harmonious system on the basis of scientific methods..." (page 24).

The symposium also contains statements concerning the assignment of the task of investigation and use of results obtained. There is cited, for example, the following thought of one of the authors. "I am not afraid that I will overestimate the enormous importance and, I would add, the enormous difficulty of correctly stating the problem. I would say that it is much worse to obtain an exhaustive answer to an incorrectly stated question than an incomplete answer to a correctly formulated task" (page 99).

It is impossible to disagree with this statement. It is true that if there is no clear idea about what should be the result of the operations research, then not even the most perfect scientific methods will help. And on the contrary, a correctly stated task to a significant degree guarantees a true solution to the problem at hand.

In the opinion of J. R. Goldstein (US) there are two extremes, into one of which the statement of the task usually falls. It is either formulated too broadly, which seriously hinders the research, or very narrowly, which leads to a simplified and partial solution. Both extremes are poor. In the first instance even a simple task can take on such size due to an abundance of alternatives that it will be practically impossible to solve it. In the second, the solution obtained may turn out to be simply useless.

What then is needed for a correct statement of tasks? Maj Gen Frank Besson (US) proposed to solve the very important question of operations research by the technique of operations research itself. He believes that the development of the tasks for investigation and for decision-making by the commander have an identical goal. Consequently they should also have an identical structure. And inasmuch as the method for making decisions has been built up over centuries and by the present time is a very precise procedure, then it must be taken as a model for the correct statement of the task. Here is cited the example of the sequence of decision-making as outlined in the Staff Officers Field Manual of the American Army. There are listed five basic stages of work considered obligatory. The first is the statement of the task (formulation of the purpose); the second is analysis of the situation (evaluation of the capabilities of the enemy, determination of the actions which could lead to fulfillment of the assigned mission); third is an analysis of the effect of different factors on each of the courses of action; fourth is a comparison of different combat means, an evaluation of their advantages and disadvantages; fifth is the decision on the basis of the chosen course of action. The mission for investigation should also be developed in approximately this manner (page 109).

At the conference were named several general (typical) tasks which can be assigned in investigating various operations. For example, the task for optimization, maximization or minimization depending on the specific conditions. The "control task" is analogous. Its essence reduces to the necessity to learn whether deviations from the given program are random or nonrandom. The task of perspective planning and research of an organization, i.e. organizational structure, is very real. The American firm of Lockheed explained what significance there would be in "Air-to-Air" rockets in air defense over the next 10-15 years (page 60).

A second (after statement of the task) no less important and just as difficult problem is considered by western operations researchers to be the selection of criteria for evaluating various forms of the solution -- the so-called criterion of effectiveness. In their opinion the matter is complicated by the fact that in the majority of cases they must be guided by several parameters at once. For example, for evaluation of one system of air defense the following criteria were proposed: 1 -- damage inflicted on the enemy; 2 -- number of targets, for whose intercept a large quantity of basic forces is not required in view of the sufficient effectiveness of means at individual sites; 3 -- time to bring the entire system into combat readiness; 4 -- size of the effectiveness criterion determined by #1 and #2 for a unit of the system (page 158).

Moreover, sometimes a solution answering one point does not satisfy the remaining ones or vice versa. There is also the possibility that the criterion changes its value with time. In this same example is not excluded the possibility of a sharp improvement in targets or an increase in effectiveness of the PVO means, for science and technology are constantly developing. At that time the entire system will cease to conform to the previous evaluation.

That is why it is considered especially difficult to select criteria in tasks of the future, where conditions are to a considerable degree undetermined. In addition, some elements of certain problems, and sometimes all problems as a whole are not subject to analytical solution (for example, the conduct of a person under various situations). Then it is proposed to use in the form of a criterion... common sense. The US representative who introduced this proposal has in mind here primarily experience (pages 102-103). Assuming that one person can have sufficient experience in only one special field, he proposes to break the element (or problem) down into component parts and evaluate them separately. And so that the final solution is not dependent on someone's intuition, it is recommended to determine the effectiveness of each element simultaneously with an analysis of the entire system, i.e. with the participation of the remaining specialists.

The book being reviewed devotes much time to the use of ready results of operations research. The researchers deplore the fact that sometimes the customers do not understand them. Moreover they acknowledge the presence of specific difficulties for the uninitiated and come to a unanimous conclusion about the need for a translation of results obtained into a language accessible to all.

At the same time it is noted that there is a basic difference in passing the results to the higher-ups and to the lower elements.

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The "chiefs" require broad generalizations which encompass a multitude of factors, while the "indians" on the contrary need a great deal of specifics and detailed itemization. For the researchers both take up much time -- the process of developing solutions, even using high-speed computers, becomes excessively cumbersome. One thing which these opposites have in common is their purpose (for example, two treatments of solutions to one strategic operation).

In the course of the conference the following question was also touched upon: can a leader (or a "customer" in general) reject and refuse the recommendations of researchers, and who in such a situation must answer for the consequences? Can, for example, [word partially legible - a commander?] disagree with all courses of a solution prepared for him? Civilian participants of the conference acknowledged that the military have such a right, but they suggested that the responsibility be placed only on the military, to which the latter agreed in principle.

On their part the military men also expressed a number of desires on the question. In particular they directed the civilians' attention to the factor of time and stressed that it is better to receive an incomplete answer on time than an exhaustive solution late. They especially noted the need for making military decisions at the necessary moment by means of any way possible. Here the role of the civilian specialists, in their opinion, should be to aid the military in quickly selecting the most effective way for using available forces and means, and then to give them the opportunity to "foresee the necessity for making urgent decisions in the future and to prepare for this" (page 112).

Two reports were given at the conference on the structure of operations research organizations (US and England) and one on the selection and training of research cadres (US). Representatives of other countries also took part in the discussion. However in order to become acquainted with the organizational structure of these establishments as accepted in the West it is sufficient to examine this matter in the US, the more so since the American representative stressed that allegedly "there is no essential difference functionally between the organization of operations research in the US and England in the military field ...I was amazed by the great similarity not only of organizational structures, but also organizational problems" (page 271).

In the report by the American representative is noted their tendency to conduct operations research everywhere and on a large scale. "Commanders and leaders of all ranks and grades understood that such an approach seriously eases their work for them" (page 272).

The US Secretary of Defense is served by a special weapons system evaluation group. It initially consisted of half civilian scientists and half regular officers of the three armed services. Chief of the group could only be a military man, and the scientific director a prominent civilian scientist. Then after a number of organizational changes the group increased in size and the value of its research for the Secretary of Defense significantly rose.

Each armed service has its own parallel research organizations. The US Army has conducted operations research since 1948. The peculiarity of this work lies in the fact that this new science is used simultaneously both for an analysis of the operations of the Second World War and for predictions. At present, in addition to the main group which studies combined arms problem, there exists a multitude of specialized groups of various purpose and sizes: the Weapons Analysis Laboratory of the Aberdeen Proving Grounds, the Experimental Command Group for Development of Tactical Problems, the Continental Command Group, groups of the arms of service (artillery, engineer, chemical, transportation, etc.), divisions of Army schools for perfecting tactical techniques and others.

The US Air Force as early as 1942 established sections for analysis of operations with each major command (at first only with air armies, later higher and lower). This structure has been maintained to the present. In the H2 USAF there is an operations analysis division. In addition to it there are independent (not subordinate to it) sections in the strategic and tactical, the Far East and other commands. In addition to this the USAF signs contracts with major firms for developmental research for the purpose of predicting changes in the field of strategy, tactics and technology.

The US Navy also formed its operations research groups during the war. They solved such special problems as antisubmarine defense, mine warfare, and certain problems of the air war at sea. These groups basically consisted of civilian scientists and were subordinate to the Chief of Naval Operations. Later a new organization was created from them, called the Operations Evaluation Group. A portion of it was transferred to the USN Scientific Research Administration, which works on problems of perspective planning. A naval warfare research group headed by a superior officer was established under the CNO. In addition a number of civilian groups with institutes and universities work constantly on naval contracts.

In approximately the same structure there exist and function military operations research organizations in England and other NATO countries. Certain particular distinctions and also the degree of

are caused by the capabilities of these countries and by the different structures of their armed forces.

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It is characteristic of the allies of the Atlantic Pact that all its members including Turkey, Denmark and even the Benelux countries are engaged in operations research. True, the tasks are distributed in a differentiated manner -- the senior partners take the main tasks on themselves while the junior partners are given the secondary ones. There is a good exchange of information on results obtained.

Western specialists consider the system of military operations research organizations accepted in their countries to be sufficiently flexible, effective and viable both for peacetime and wartime. It is difficult to judge whether or not they are correct. In any case the industry of these countries has almost completely shifted the military structure to its own organizations for operations research. Moreover, the American and other industrialists seriously hope to avoid, with the aid of the new science, a crisis of economic overproduction. Thus, in reading between the lines of the reports of representatives of the Rand Corporation and Lockheed, there is the thought that now the "golden age" of capitalism is not far off: production and consumption, supply and demand -- everything will be researched, planned and realized.

Vain hopes! Through operations research it is possible to somewhat regulate the capitalistic market, but no more. The chief causes of crises -- private property, the contradiction between the nature of work and method of appropriation, the unrestrained race for profits, "free" trade -- will remain unchanged. In the capitalist world it is possible to predict through operations research the approach of economic overproduction, but it is impossible to prevent it. And while before the crisis fell upon the capitalists unexpectedly, then now they will know beforehand of its inevitable arrival. Figuratively speaking -- before the capitalists went to the precipice with blindfolds, now they will see it, but nevertheless will not be able to go around it.

The questions of cadres have indissoluble ties with the structure of military operations research organizations. Who is to take up the research, military or civilian, scientists or technical specialists, naturalists (mathematicians, physicists and others) or representatives of the humanitarian sciences? These questions were widely discussed at the conference.

It is stressed in the materials of the book that in spite of the fact that the cooperation of military and civilian workers in this field has produced good results, it is not wise to preserve

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this situation in the future. "It is better if specialists for military operations research would be regular military servicemen from the very beginning" (page 38). But for a [partially legible .. more?] organic tie with science and the weapons industry it is recommended to also attract a certain percentage of prominent scientists and civil engineers.

It is stated in the book that for operations research there are needed, in addition to the precise sciences, humanitarian sciences (page 286). The reporter, in spite of the majority opinion that the new science is purely mathematical, graphically showed that in addition to mathematicians, physicists, chemists, engineers and biologists there should also be philosophers, economists, historians, politicians and even psychologists in the ranks of the researchers.

From this there logically arose a new serious questions where to get such a multitude of various specialists. Should they be attracted from outside or should one's own cadres be trained? The first path is one primarily taken by American organizers of operations research. It is known that it is officially admitted in the US that it is more suitable to "buy up" major scientists throughout the world than train their own. The scientists of various countries worked on the atomic bomb on such a basis, and many other scientific discoveries were thus made. However recently this commercial principle has more and more become a flash in the pan. Thus rocket building specialists brought to the US from various countries have to this time not been able to create sufficiently powerful and reliable boosters for launching heavy satellite craft into space.

It should be noted that the organized training of various specialists in operations research is being widely conducted in the main NATO countries. In the US, for example, each branch of the armed services is training its own cadres: the Army in its schools, the USAF in state colleges, the USN in higher requalification schools (senior naval officers who have taken an academic course on operations research are awarded the first scientific degree -- master). In England approximately the same system exists. In France there has been created a military center for training specialists in operations research. In addition special cycles have been introduced in higher military educational institutions. In Italy the officers are taught operations research in courses at Milan University. West Germany sends its specialists for training in the US.

Thus the requirement for research of urgent problems occasioned the need for training necessary specialists. A broad influx of cadres now permits the analysis of ever newer fields of military affairs.

What then is the direction of future work in operations research in the North Atlantic bloc? "The prospects of development of operations research in NATO countries is an extremely big question..." (page 297) is stressed in the book under review. Main efforts should be directed primarily at the development of problems which are especially important both for NATO as a whole and for each country individually. First among such problems is stated to be the development of weapons systems, and in the perspective is a systematic research of even the international situation. It is acknowledged as wise not to be limited only to complex and ultra-modern questions, but to penetrate into any field which has a need for research and where there is a hope to obtain a useful result. In addition it is noted that they should not take up secondary questions where there will not be over 5-10% gain. Within the bounds of the selected limitations it is planned in particular to draw up and systematically define plans for assembly and analysis of necessary information on the possibilities of combat operations on land, in the air and on the sea. For this purpose there should be in each military unit detailed instructions on the procedure for transmitting the appropriate data. Training will be regularly conducted in operations research (during maneuvers), using military organizations for this; there will be orientation on the research both for "global" and "local" wars, giving preference to the former. For this in peacetime it is necessary by modelling to thoroughly analyze the possible combat operations of transient nuclear warfare and to set up opportune, exact research programs.

The search for new methods of operations research, and also the improvement of existing methods and broadening of the field of their application is acknowledged to be an important direction of future work. Thus it is said about the methods of Pascal, Savage and Wald that they can serve as criteria for evaluation of the most complex element of the system -- the behaviour of man in the face of events. It is suggested that special attention be given to methods of the theory of selection, inasmuch as it becomes the central theory of the new science. It is pointed out that in combining analytic methods with experimental ones, the latter have the final word. In both cases it is recommended to make broader use of examples of analogy of phenomena.

A special role in the developmental plan is given to war games, inasmuch as they not only train researchers, but also permit testing of new methods and assist in revealing additional fields for the use of existing methods. The necessity is stressed for a deeper research of the theory and rules of war games, especially many-sided ones.

It is evident from the book that one of the most difficult

tasks of the future is the achievement of great precision in operations research, and primarily in evaluations. For the successful solution of this problem it is suggested that such a means be created that would be similar to a topographic map in precision, accuracy and be understandable by all.

The question of using electronic computers is in direct relationship to the stated tasks. After a statement that without them it would be unthinkable to use many analytical methods, the researchers are cautioned against an extreme attraction for computer technology and against an erroneous identification of methods of decision-making with methods of use of these machines.

In connection with the abundance and variety of problems before the NATO operations researchers, there is stated the necessity for the distribution of duties among the countries. In order to avoid duplication a decision was made to organize an exchange of operational information, and for the coordination of all works to establish a single center with the task of operations research for NATO as a whole. It is not proposed to change existing systems of operations research (groups) within the countries, as a certain difference between them is viewed as a positive factor, since it permits making comparisons and, in case of need, of determining a new structure. For greater flexibility it is planned to staff the groups with various specialists, to subordinate them to the highest individual within a specific system, to give broad authority and not to load him down with extraneous current matters.

The conference quite fully formulated the principles of specialist training, and also the general requirements which must be answered by the operations researcher. Above all it was noted that the training of cadres must be conducted constantly. For those specialists who have completed higher educational institutions and are included in the groups training continues in the process of work itself, through an organized system of independent classes at work and in free time, by means of correspondence improvement courses or by taking a special cycle of lectures, and also in the course of working on dissertations.

There is emphasis in all reports and speeches . . . idea of the necessity for a broad and deep introduction of operations research into all decisive fields of military affairs. It is believed that until a strict scientific form of thinking is introduced into an evaluation of a situation, no weapon, not even the most improved one, will have the necessary effect. In order to bring greater attention to operations research it was decided to intensify propaganda concerning it in the press by means of a sharp increase in publication of special symposia of articles and materials of similar conferences.

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The leit-motif of future work in NATO on operations research is the statement that "modern warfare will be very transient and that in its course there will hardly be time to replace unsuccessful military leaders. Commanders will have too little opportunity to acquire experience during combat operations, and therefore now it is [word illegible] necessary to draw up plans and check them piece by piece as thoroughly as is at all possible" (page 163).

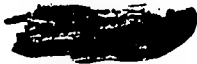
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Such an approach to operations research in the NATO countries is also of undoubted interest for our readers. The Military Publishing House did well to publish the book Operations Research in Practice. It is only unfortunate that it was very late. It is hoped that the translation of the symposium Documents of the Second International Congress on Operations Research (Paris -- 1961), which contains interesting materials on operations research, will be published more quickly.

There is also too much delay with the publication of the book by T. ?Saaty? [proper name partially legible] Mathematical Methods of Operations Research, which is mentioned in the symposium being reviewed (page 7) as being ready for publication.

We must not forget that operations research is now being intensively introduced into all facets of public life, and especially into military matters. It can be assumed that the Pentagon switched to the pentomic divisions with the direct participation of operations researchers, and then rejected them. It was not without the participation of operations research that the US took the course for creating a missile submarine fleet in place of strategic aviation, missile bases and carrier task forces. It is probably not easy to change a weapons system, inasmuch as an enormous role in capitalist countries in the solution of similar problems is played by underhanded machinations of competing firms engaged in weapons production. And if such a decision is nevertheless made, then even here it does not take place without operations research.

Materials on these problems are periodically published in many journals specializing in operations research questions. In the US, for example, several such journals are published, the leading one of which is Operations Research, which is issued six times a year. The translation and regular publication of magazine articles will also be very useful.



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By Engr-Lt Col Yu. El'terman

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One of the characteristic peculiarities of modern operations is, as we all know, the speed with which a situation changes and, along with it, the increased importance of the factor of time in a combat action, particularly in control of troops.

It should be noted that in recent years the troops of the leading nations have been provided increasingly greater amounts of communications equipment. The amount of such gear in control centers has increased markedly, and the quality has increased immeasurably compared to the equipment used during World War II.

The organization of communications and the effectiveness of its operation depend in great measure on the ability of the individual to use a system of communication and paying attention to questions dealing with the care and protection of the equipment during the course of an operation, as well as on the proper and skillful employment of technical facilities at hand.

As is generally known, in controlling troops use is made of short-wave radio along with wire, radio relay and other means of communications. Each of these means has its advantages and disadvantages. For example, cable and radio relay lines have a high traffic-carrying capacity. With the aid of additional multiplexing equipment it is possible to set up many single line telephone and telegraph channels, and because of the low degree of interference these lines insure high quality communications.

Along with this, when enemy forces are employing a great degree of fire or when rapid troop movements are involved radio communications has an unquestioned superiority compared with other kinds of communications. The use of radio makes it possible quickly to set up new channels of communication without laborious effort given a limited amount of time. With shortwave radio equipment it is possible to effect communications over great distances -- up to hundreds of kilometers in extent -- with relaying, across enemy-occupied territory, or across radioactivity contaminated zones.

Mobility and speed of deployment of radio equipment make it possible to ensure communications while in motion, during short halts, while shifting control centers, as well as when time was lacking to set up a communications center.

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Along with other means of military type communications equipment the armies of NATO member nations place great store by various kinds of shortwave radio gear with a variety of power outputs.

However, the extensive range of action and the capacity of radio-waves to propagate in all directions has its adverse effect also: there is the chance that mutual interference can result from the large number of simultaneously functioning radio sets.

Let us consider in greater detail some of the reasons for interruption of shortwave radio communications due to interferences and the methods of improving stability.

Depending on their origin the principal types of interference can be divided into three groups: mutual interferences produced by closely-disposed radio sets belonging to a given communications center; station interferences produced by broadcasting facilities located some distance away; short-duration interferences in communications when the correspondent's signal is fading. The necessity of insuring dependable control over troops calls for a large quantity of radio communications equipment in the control centers; at times as many as a score or more radio sets are used. These include equipment authorized by TOE as well as radio sets used by the communications officers of the various arms or services, special systems of communications, etc. By disposing all these radio sets directly within the control center area or in its immediate vicinity the powerful transmitters of the different stations are capable of inducing great voltages (exceeding the strength of useful signals by hundred-fold intensity) on the antennas of nearby receivers.

When the difference in frequencies between transmitter and receiver is small (of the order of ten or a hundred kilocycles) the input circuit of a radio receiver does not insure adequate protection against such interfering voltages. The detrimental effect of the latter consists in that they suppress the useful signal in the non-linear tube stages. In addition, in the frequency band beamed by each transmitter there is, along with the basic operating frequency, many so-called side components. These are not audible to the correspondent since they lag far behind in frequency and are of a relatively low level. But for receivers which are disposed in a radius of up to several kilometers they can produce severe interferences. For example, when operating on a 3 mc waveband the transmitter beams another entire band of frequencies that are multiples of 3 Mc as a result of which the receivers located nearby and tuned, say, to a frequency of 6 Mc, 9 Mc. and the like will be suppressed by interferences from such a transmitter.

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[Translator's note: A portion of the text is obscured so that an intelligent translation is impossible. It deals with harmonics as factors in interference and with cross-talk.]

The methods of eliminating intra-unit interferences created by operating and secondary radiations by their own transmitters boils down, mainly, to the correct disposition of radio equipment within the center.

The most radical measure is to move all transmitters of the center a sufficiently great distance away; the sites are selected depending on the size of the control center, the time available for organizing a radio communications center, and the means available for remote control of transmitters. The areas of disposition of transmitters and their distance from the communications center are also dictated by considerations of camouflage of control points.

The order of disposing radio receivers and their antennas is governed by the necessity of excluding local electrical interferences emanating from telegraph station equipment and other elements within the communications center, as well as by the need of selecting the best conditions for the reception of signals from the sender. If receivers are set up near large nearby objects, in dense forests, and the like we get poorer reception of useful signals, and this gives rise to increased chances of radio interference.

Another reason why communications are affected is because of the long lines between the units of apparatus in the communications center. Often, valuable information obtained by radio from a distance of many hundreds of kilometers is lost at the communications center because of troubles that occur on a line a hundred meters long between the pieces of equipment on that line.

All these requirements for arranging radio sets should be taken into account very carefully when organizing a communications center and in the selection of a site for such a center.

Another possible reason for disturbing radio communications are the interferences coming from extraneous radio sets. We know that the total number of radiators of various kinds in the armed forces has increased markedly during the past 20 years -- the total has more than tripled (cf Voyenny Vestnik, No 8, 1962, pp 122). Experience shows that even low-powered, shortwave radio sets can cause interferences not only at short distances but at greater distances as well-- of the order of 400-500 km. The reasons for this phenomenon are to be sought in the peculiarities of short wave radio propagation; these waves are reflected from the upper ionized atmospheric layers (the ionosphere). 300 km, and because of this condition it is possible to establish long range communications -- up to several thousand kilometers.

The antenna known as the balanced doublet, consisting of two horizontal beams suspended a height of 8-10 meters above the ground, is widely used for reflected beam broadcast work. A large portion of the power of such an antenna is radiated upward and is then reflected by the ionosphere. It ensures good communications far beyond the limits of the line of sight within a radius of 500 to 1,000 km.

Along with this, use is sometimes made of the vertical rod antenna which has horizontal directional properties; usually it is used for ground wave work at distances of up to 30 or 50 km. At distances of from 50 to 400 km the rod antenna creates the so-called "dead zone" in which reception is impossible; however, beyond the limits of this zone the signal again appears (within a radius of 1,000 km) due to that portion of the radiowave which is reflected from the ground at a low angle and transmitted far beyond the horizon after bouncing off the ionosphere. By reason of these properties of the rod antenna, shortwave radio stations can cause interference for other radio sets, including those of the operational level, on a vast area with a radius of between 1,000 - 1,500 km.

Taking into account the peculiarities of long range propagation of radiowaves the matter of assigning operating frequencies to radio stations is a very complicated and meticulous thing. Even the most careful selection of frequencies cannot fully protect radio communications against disturbances from long range radio stations operating in adjacent foreign countries or in enemy territory during wartime.

When interferences arise the practice is followed of substituting other wavelengths, striving to select one which is least affected by interferences. For this purpose there is organized at the communications center a standby receiver service for determining interference-free reserve frequencies.

To enhance stability of communications when there are interferences one can also changeover to the use of keyed transmission and audio reception. The radioman's ear has additional filtering properties (similar to a filter with a passband of the order of 200 cycles) which makes it possible to separate useful signals from interferences by frequency. An important factor in enhancing the interference killing feature of audio reception is the possibility of repeated challenges which, in the opinion of the radio operator, are dubious due to distortion by interferences.

Moreover, audio reception lowers the carrying capacity of the communications channel. Whereas the telegraph apparatus permits transmitting approximately 50 five-symbol groups per minute, one can transmit only 12 to 15 groups by key during the same time. Therefore, audible exchange results in reducing the speed and volume of information exchanged.

Mutual interferences can be reduced somewhat if ultrashort waves are used for near communications; these are poorly reflected by the ionosphere and hence create interferences only at the limits of the ground wave operating range.

It is important to emphasize that the range of ground wave communication in the ultrashort wave and shortwave bands is practically the same: during the daytime it is somewhat greater in the shortwave range, while at night, with an increased level of interference on short waves, the range is greater in the ultrashort wave band. These points are considered in greater detail in special books devoted to the subject (Peculiarities of propagation of meter waves -- Yu. I. Davydenko and N. T. Nechayev, Voyennizdat, 1960). Thus, by way of example, the new radio sets on the tactical level in the United States Army have a frequency range from 30 to 70 Mc ("Electronics", October 13, 1962). For these reasons tactical units prefer UHF bands in ground wave communications.

Overloading the shortwave band and mutual interferences can be decreased, also, by restricting shortwave telephony and through the wider utilization of radio telegraphy.

Telephonic communications is more effective for operational purposes and more convenient to use by commanders because it results in closer contact. However, one must not fail to take into account the inadequate quality of shortwave telephonic communication and the narrowness of the shortwave bands which does not allow of the necessary number of telephonic channels.

In order to transmit the minimum necessary band of frequencies used in human speech (300 - 3400 cycles) it is necessary to have a double band of transmitter frequencies, i.e. about 7 Kc. In practice, for each telephonic channel of communication, taking into account the necessary protective sector between adjacent channels, it is essential to set aside a band of frequencies equal to 10 Kc (in so-called single side band modulation this interval can be reduced to 5 Kc).

At the same time, for telegraphic operations it is possible to designate operating waves approximately 1 Kc apart. This means that each telephonic channel requires as many operating waves as do approximately 10 telegraphic channels. If one operating frequency (10 Kc band) is assigned for every 10 telephone channels of communications under conditions when there are not enough wavebands, then, as a result of mutual interference communications will be virtually impossible. Changeover to telegraphic operation permits in this instance the accommodation within this same band all ten channels of radio communications with intervals through 1 Kc without mutual interference.

It should be borne in mind that apart from increasing the number of channels and improving the stability of radio communications, tele-typing equipment offers other advantages also such as providing a documentary record of the communication.

Let us consider a third group of possible troubles with short-wave radio communications -- shortwave interferences caused by fading. By fading we mean the periodic changes in the volume level of the signal received due to multibeam propagation of radiowaves. The fact is that the receiving antenna usually receives not one but several beams (radiowaves) at a time from the sender via different paths.

We know from physics that when several oscillations are added together the magnitude of the resultant oscillation is determined by the phases of its individual components; because the phases of incoming signals, which are a function of distance, are not constant (since the height of the ionizing layer and its degree of ionization change constantly), the amplitude of the voltage at the receiving antenna changes within broad limits. If the level of the incoming signal is comparatively great, e.g. several score times greater than the level of station and atmospheric noises at the receiver input, then, as a result of fading, there are only occasional distortions of individual telegraph transmissions at the moment when the splurge of noises coincides with the minimum level of the signal. If the signal volume is only slightly greater than the interference, the distortion is considerable.

Stability of the telegraph communications channel is determined by the magnitude of the loss of reliability, i.e. the ratio of the number of distorted signals to the number of signals transmitted. For the usual kind of letter printing telegraphic work (frequency telegraphing) loss of reliability ($P_{\gamma T}$) under conditions of fading is determined by the probability theory and can be expressed by the following simple formula: $P_{\gamma T} = \frac{E_{\text{ш}}^2}{E_c^2}$

i.e. it is directly proportional to the mean square noise voltage ($E_{\text{ш}}$) and inversely proportional to the mean square signal voltage (E_c).

If we assume that the loss of reliability should not exceed $P_{\gamma T} = 1 \cdot 10^{-3}$ i.e. not over one distorted per thousand transmitted, it is essential to insure a relationship of signal level to noise level of 33. At a lower signal level there is increased probability of distortion. It follows from this that the power of a transmitter, which governs the necessary signal level, is of great importance to the quality of radio communications. Thus, increasing the power of a transmitter 10-fold (e.g. replacing a 100 watt transmitter with a 1,000 watt unit) increases the field voltage by a factor of 3.3 or 10 times the square of the field voltage; this, in accordance with the above indicated formula exceeds the loss of reliability by a factor of 10.

Of great importance in insuring a desirable signal level is the proper selection of the communications wave length as a function of broadcasting conditions. The ionized layer reflects waves which do not exceed a specific frequency, the so-called critical reflection frequency. The value of this reflection frequency depends on the height of the ionizing layer, the season of the year, and the time of day. In addition, it changes in accordance with 11-year sunspot activity cycles.

When carrying on night communications during the winter season for a distance of up to 300 km during periods of minimum sunspot activity the value of the reflection frequency is reduced down to 3 Mc and less. Under such conditions, one can use only a very small portion of the total shortwave band carried by a shortwave set. This sharply increases the band load and the danger of mutual interferences during these periods. For this reason and also in consequence of the increase in the range of interference during the night period, it is considerably more difficult to maintain shortwave communications at night than in the daytime.

During daytime (especially during years of maximum solar activity, the reflection frequency limit is quite high -- from 6 to 12 Mc. However, when using frequencies which are of the order of 1.5-2.0 times lower than the critical reflection frequency the field voltage decreases markedly.

Thus, in assigning operating frequencies it is essential carefully to take into account the peculiarities of radiowave broadcasting, the changes in critical reflection frequencies, and use suitable wave lengths for communicating day and night.

Unfortunately, given the great amount of radio equipments used by troops it is very difficult to assign optimal wavelengths to all radio nets and directions and, therefore, insure good communicating conditions, especially for teletyping.

Stabilizing radio communications with respect to fading can be achieved by the use of duplex spaced reception (sdvoyennogo prostranstvenno-raznesennogo priyema) in which two receiving antennas are used; these are set up approximately 200-300 meters apart and used with two receivers having a common output. Due to the difference in distances to each of the antennas the incoming beams arrive differently in each one. When the oscillations in one of the sets exceeds the minimum the other, as a rule, has an adequate signal level. When using cross blocking, the receiver with the weakest signal is blocked at the output circuit and, therefore, the telegraph apparatus receives only comparatively high level signals.

One of the most common reasons why shortwave communications are affected, as we have already pointed out, is the combined action of interferences and fading; because of fading, the signal weakens and the output relay is then controlled by the interferences which produce distortions and malfunctions in the receiving telegraph apparatus.

In duplex reception the fading effect is virtually excluded hence a considerably lower signal to noise dominance is permissible. Loss of fidelity when fading is absent can be determined from the formula: $P_{UT} = \frac{1}{2} C \frac{E_n}{E_s}$ in which $e = 2.18$. Computations by this formula demonstrate that a good quality of communications ($P_{UT} = 1.10^{-3}$) can be achieved when the signal-to-noise ratio is of the order of 4 rather than 33. This gain is equivalent, approximately, to an 8-fold increase in transmitter power output.

With this method it is possible also to evaluate the effectiveness of the use of an additional receiver tuned to a standby wavelength. The probability of the appearance of random stationary interferences on two wavelengths simultaneously, naturally, is considerably less than on one. For example, if the probability of hitting one channel $P_1 = 0.2$ then with two channels it will be equal to $P_2 = 0.2^2 = 0.04$.

The above indicated possible sources of trouble in shortwave radio communications do not, however, detract from those outstanding advantages inherent in radio as compared with other kinds of communications. On the one hand, it is important to employ mechanical or technical measures for protection against local interferences, select correct wave lengths, etc; on the other hand, it is necessary carefully to process the documents in order to avoid transmitting extra or repetitious information within them which would overload the radio channels. It is important also correctly to establish the time and sequence for the transmission of documents. In this connection, it is important to coordinate the activities of the communications personnel and staff officers. The latter should know exactly the actual capacities of the communications channels, and in preparing the operation they should take the necessary measures to reduce the scope of the radio programs, make broader use of radio communications tables, coded charts, etc.

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Naturally, the above do not exhaust the many engineer and organizational problems encountered in improving radio communications stability.

Under modern conditions all commanders and staff officers are expected to have a well-grounded knowledge of the theory and practice of radio communications. This is necessary to properly dispose the various elements of the communications center, select the most effective types of activity for the radio system, prepare the appropriate documentation, maneuver the radio equipment during the course of an operation, etc. Only under these conditions may one hope for a successful solution of the problems involved in providing uninterrupted control of troops by radio.

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Army Gen V. Kurasov

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In the past, troop leadership (vozhdeniye) was looked upon as the art of troop direction (rukovodstvo) in war, beginning with their approach to the field of battle and ending with the engagement. The Great Patriotic War and World War II expanded our comprehension of troop leadership and introduced significant changes into its content. But the truly basic change in the nature of troop leadership occurred with the appearance of and during the course of the rapid development of nuclear weapons.

Under contemporary conditions troop leadership may be looked upon as the art of troop direction in battles, operations, and armed conflict as a whole. Its main role belongs to the commanders (Komandiry) of sovedineniya and commanders (komanduyushchiye) of operational and strategic ob'yedineniya, that is, the basic organizers and leaders of battle and operations. Only they determine the concept of the battle or operation, make decisions for its conduct, and carry the full individual responsibility. As far as the staffs are concerned, they are necessary, very responsible and important organs of troop control, (upravleniye); however, as we well know, their entire activity is implemented on the basis of the concepts and decisions of the commanders and commanding officers by taking an active part in their preparation and formulation, and making these decisions and concepts known to the troops. Basically, the same may also be said of the political organs, which in accordance with the concepts and decisions of the commanders or commanding officers, exert direct leadership over the party-political activities, directing it towards ensuring success in the battle or the operation.

In this article, we will attempt within possible limits, to examine the role and basic activity of sovedineniya commanders and commanders of operational ob'yedineniya, and will refer to them subsequently under the term "commanders" (komanduyushchiye). As far as the role and activity of staffs and political organs during the process of troop guidance is concerned, this can be the subject of another article.

First of all troop leadership takes into account the creative activity of the commanders as expressed in their concepts for a battle or an operation, and in their decisions to execute them. This is considered the main aspect of their activity since it forms the basis for the direction of combat operations. At the same time the commander's organization and political activity has an important meaning since their results ensure the successful execution of the concepts and decisions to a considerable degree.

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troop leadership becomes a genuine military art to the commander-troop leader only in that instance when victory over the enemy is achieved rapidly and fully, without needless losses, and when his own troops are capable of conducting further combat operations. Much of this depends not only on the training of the commander and their practical experiences in troop direction, but also on their personal, primarily resolute, qualities.

The fast-moving and extremely maneuverable character of contemporary combat operations extremely complicates troop direction. Only a highly trained commander, possessing the necessary moral and combat qualities and leaning on a well-established and active staff and political organs will be able to artfully employ his troops in operations and battles. Physical and mathematical sciences are so essential to military art under contemporary conditions, that it is difficult to imagine the possibilities of successful troop direction without a knowledge of their fundamentals.

There has even been a decisive change in the modern conditions of troop leadership. During the offensive operations of the Great Patriotic and World War II, the commanders usually had sufficient time to gather the fullest data on the situation, conduct reconnaissance, develop concepts, make decisions, and, finally, conduct personal conferences with subordinates. However, under contemporary conditions they usually will not have this time and the development of the concepts for the operation, battle, and the making of decisions for their execution will be conducted in very compressed time periods and frequently in an unclear situation. Brief instructions, rapidly transmitted by technical means are becoming the basic method of troop control rather than personal conferences between the commanders and their subordinates.

All troop leadership activity, particularly in offensive operations, will now have to be implemented by the soyedineniya commanders while on the march and during short halts. Commanding officers of operational ob'yedineniya will now have to exercise troop leadership from frequently displaced command posts.

All of this, as well as the complex and sharply changing situation in which this work usually is conducted, forcefully demands mechanization and automation of troop control, different organization and new methods of work on the part of commanders, staffs, and political organs, and more appropriate, highly maneuverable and dynamic forms of troop combat operations.

Let us briefly examine the contents of the commanders' activity in troop leadership.

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The creative activity of commanders is most important, as during its process the bold and original battle and operation concepts are formulated, and the decision for their execution is taken. It is during the process of this activity that the bases of successful combat operations are laid down. A commander's achievements in military art and a degree of its superiority over the military art of the enemy is reflected most fully in his concepts and decisions.

By its very nature, the basic aim of the creative activity of the commanders is in determining the concept and in decision-making. However, to achieve this aim, the clarification of the objectives of the battle or operation and the evaluation of the situation are very necessary and extremely important. The correct concept cannot be formulated and an expedient decision cannot be taken without a full clarification of the objectives of the battle and operation and a full and painstaking evaluation of the situation. Moreover, decisions which are made without a deep clarification of the objectives of the battle or operation and a deep analysis of the situation, as experiences in the past war have shown, result in failures.

The clarification of the objectives of a battle or operation, and, particularly, the evaluation of the situation under conditions of a future war, must to an even greater degree than in the past war, become the system of constant concern on the part of the commanders, as well as those individuals who direct staffs and field control elements. It should be kept in mind, however, that this system will give practical results only when it has been carefully formulated well ahead of time and is completely mastered by the commanders and the individuals directing the staffs and field control elements.

Under contemporary conditions, the scope of creative activity of commanders has increased significantly, whereas the time for implementing it has sharply decreased. So that this activity may always be on the level of the requirements imposed upon it, the following are now very necessary:

constantly conduct active and purposeful reconnaissance of the enemy and particularly of his means of nuclear attack; if necessary it should be reinforced during the period preceding the time the decision is taken;

constantly and particularly in clarifying the objectives of the operation or battle, as well as in evaluating the situation, demonstrate deep operational foresight in the development of friendly and enemy troop activity especially after nuclear strikes have been delivered;

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always be aware of the condition of the radiological situation and maintain an uninterrupted reconnaissance of it;

develop the concepts for the operation and battle within the shortest time possible and make the decision quickly.

These are only a few of those basic requirements whose execution in the process of creative activity by the commanders ensures the achievement of success in an operation or battle.

At any given moment in an operation or battle, the staffs must provide the commanders with data on the situation, prognoses, and calculations, which are necessary for making decision. This is a most important functions of modern staffs which must also be executed on the basis of deep operational foresight regarding the development of the situation.

The creative activity of a military leader in preparing for and executing any battle or operation begins with a clarification of the objectives. What is understood in this?

Clarifying the objective of an operation or battle, as we visualize it, means properly understanding the requirements of the senior command, and the combat missions assigned by them, determining the role of one's own operational ob'yedineniye or soyedineniye in the forthcoming operation or battle, noting the main effort of friendly troop concentrations, and the most effective methods of their coordinated action.

In analyzing the requirements of the senior command, it is first of all necessary to clarify what the enemy groupings are and in which areas they must be destroyed; determine the strength and composition of these groupings, and the degree of their destruction; and determine the areas which must be occupied by friendly troops after destroying the enemy groupings, and the time period in which these areas must be occupied. Just the mere listing of these questions indicates the importance of correctly understanding the basic requirements of the senior command in order to develop the concepts and make a clear decision.

Only after exposing these requirements can a proper determination be made of the role of one's operational ob'yedineniye or soyedineniye in the forthcoming operation, the direction of the main thrust by the troops and the methods of their coordinated activity. Under some conditions, the role of a given operational ob'yedineniye or soyedineniye may be the main one, and then the coordinated activity of all troops participating in the operation will be implemented in

their interests. Under other conditions this role may be a supporting one and then the given operational ob'yedineniye or soye-dineniye must render assistance to other operational ob'yedineniye or soyedineniya which have the main role in the operation.

The direction of the main effort can be most correctly selected only after the main enemy grouping to be destroyed is identified and the location of the main objectives which are to sustain nuclear attack are exactly identified.

In clarifying the objectives of the operation or battle the fundamentals of the concepts are set forth first and subsequently made more precise during the process of evaluating the situation.

As a rule, and because of the extreme importance and responsibility of this activity, clarification of the objectives of an operation or battle is personally and independently implemented by the commander. In some cases he may bring in the chief of staff and other responsible individuals of field control elements into this activity.

A deep clarification of the objectives of the operation or battle gives the commander confidence that his plan, that his decision will be formulated on a correct basis and that the effort of his subordinate troops will be directed towards achieving that which has been demanded by the senior command.

The estimate of the situation is an important aspect of the creative activity of the commanders. The quality of the concepts and decisions depends upon the degree of depth and carefulness of the estimate of the situation. Errors and miscalculations in estimating the situation, as experience of past wars and postwar exercises has shown, have resulted in bias and improper decisions, as well as in situations where the main efforts of operational ob'yedineniya were frequently concentrated in directions where they could not bring decisive results while forces and means were inadequate in the line of the main effort where the fate of the operation and battle was actually being decided.

In estimating the situation, it is extremely important to correctly evaluate the designs of the enemy, and not to underestimate his strength, means, and capabilities, particularly in the use of nuclear weapons since this would result in a preconceived decision calculated for easy success and would thus lead to heavy friendly troop losses if a strong and active enemy were met. It is expedient to consider the worse and most complicated situation for oneself; however, the enemy should not be overestimated inasmuch as this can result in timid decisions and an overly careful and passive activity by the friendly troops.

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It is necessary to make a rapid but at the same time deep and comprehensive analysis of the following:

the enemy's strengths and means in the zone of action of one's own operational ob'yedineniye or so'yedineniye, as well as on the flanks, and first of all the enemy's means of nuclear attack and their combat capabilities; the probable enemy plans, his groupings of forces and means; the main and secondary directions of enemy combat actions and the time of their onset; the weak and strong sides of the enemy; possible changes in all of these data from the onset and during the course of the operation or battle;

the strengths, means, and combat capabilities of friendly troops and primarily the capabilities of the nuclear means, the direction of the main and secondary thrusts, and the possible troop groupings in them; the most effective means of employing nuclear weapons and other means of combat along the directions; the relation of forces (friendly and enemy), as well as the possibilities of changes in this relation from the onset and during the course of the battle or operations; the terrain characteristics in the action zone of friendly troops and particularly in the direction of the main effort; its dangerous and protective features under conditions attending the employment of nuclear weapons and the effect of these features on the forthcoming combat operations of the troops; measures for the employment of advantageous terrain features and for the elimination of its negative effects;

the weather conditions and their effect on the combat operations of the troops (friendly and enemy), mainly upon the employment of nuclear weapons by the rocket troops and air forces, and in particular on the level of radioactive contamination of the area in the action zone of the troops.

During the process of estimating the situation, for purposes of rapidity and clarity, there will always be the need for various tactical and operational computations rapidly done by means of calculating and computing equipment.

In analyzing the situation, a critical approach should be made to data and their sources; and it is necessary to avoid rumors which frequently exaggerate things, prohibit one-sided evaluations of happenings and the over-evaluation of friendly successes, and to refrain from drawing hasty conclusions and deductions.

Only a deep clarification of the objectives of the operation or battle and a comprehensive, objective estimate of the situation can ensure the formulation of a bold and original concept and the taking of an expedient decision.

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The concept is essence, is the main idea of a battle operation. The entire operation or the entire battle represents the consecutive development and implementation of this main idea. It is not difficult to imagine the extreme danger which may be posed by an erroneous main idea. Neither the mastery of the troops nor their efforts in implementing such an idea can prevent failure of the operation or battle. The history of the last war has many examples supporting this position.

As we see it, the concept of an operation or battle must provide answers to approximately the following basic questions:

which enemy groupings must be destroyed; which is the main grouping; ~~how best~~ to distribute the strength of one's own operational ob'yedineniya (primary and secondary objectives); and which areas must be occupied to execute the established missions;

in what directions is it expedient to deliver the main and secondary thrusts; what friendly troop groupings must be established along these thrust lines;

on what foundations is it appropriate to develop coordinated action of one's own operational ob'yedineniya or soyedineniya with adjacent, or other branches of the armed forces, and combat arms.

Let us examine the content of an offensive operation concept in somewhat greater detail.

Under contemporary conditions, the basic enemy groupings consist of his tactical and operational means of nuclear attack and different troop soyedineniya which have been deployed for delivering the main thrust or establishing particularly strong resistance in the zone of forthcoming operations. In determining the strengths and composition of such enemy groupings, it is always necessary to take into the account the possible changes during the course of the operation as a result of our thrusts. The basic enemy grouping must be identified as precisely as possible prior to the launching of rockets or airborne-carriers, down to chast' level and even down to individual podraz-deleniy.

Only after the strength and composition of the enemy groupings have been determined is it possible to note the direction of the main effort and secondary efforts of one's own operational ob'yedineniye or soyedineniye. The main effort must give the greatest effect within the shortest period of time. For this, as we see it, it would be expedient to concentrate the basic mass of nuclear weapons against the most important targets of the main enemy grouping, and to direct

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the efforts of the motorized rifle and tank sovedineniya along the shortest routes against those targets which ensure the rapid advance of the troops and the rapid exploitation of the results of friendly nuclear strikes with the aim of completing the destruction of the enemy. Depending upon the direction of the main effort, other lines of attack are developed to ensure the destruction of the basic enemy grouping.

The strength and composition of the shock and other troop groupings of the operational ob'yedineniya or sovedineniya and their formations are made with a consideration of the size of the basic enemy grouping, but primarily in accordance with the amount and power of the nuclear ammunition issued for its destruction. Consideration should be given to the possible changes in the strength and composition of the basic enemy grouping as a result of nuclear strikes delivered against it during the course of the operation.

The bases of coordinated action of one's own operational ob'yediniye with adjacent ones and with other types of armed forces are usually determined by the missions. In so doing, the objectives in the offensive zone of one's own operational ob'yedineniya against which the adjacent operational ob'yedineniya must deliver nuclear strikes or apply other means of combat are selected and defined, as well as the objectives in the offensive zone of the adjacent elements against which we must deliver nuclear strikes. Furthermore objectives are determined for joint strikes by one's own and troops during the course of offensive operations in the interests of the rapid and complete destruction of the basic enemy grouping.

In developing the concepts of operation consideration should be given to the possible results of friendly and enemy strategic nuclear strikes delivered in the offensive zone of the operational ob'yedineniya.

It should be kept in mind that the frequent and sharp, and at the same time major, changes in the situation during the course of operations undoubtedly will introduce major corrections into the concepts and will frequently require its reformulation.

The operational concept is the result of the great personal creative activity of the commander. However, the chief of staff must always be ready to report his suggestions regarding the operational concept to the commander. During the process of developing the concept, short exchanges of ideas between the commander and the chief of staff are possible, as well as the use of reports, calculations, and ideas of the commanders of arms and chiefs of services.

The operational concept which responds more to the question of "what to do" is basic for all subsequent decisions by the commander, which primarily answer the question of "how to do it" and anticipate the most effective means of guiding troop combat operations.

The decisions of the commanders must always be bold, purposeful, valid, and, most important, must always conform to the concept of the operation and the situation. Decisions which do not answer these requirements cannot ensure the successful attainment of the objectives of the operation. In view of the extremely important significance of the decisions, the commander should make them personally and independently.

One cannot agree, for example, with the expressions of some comrades to the effect that in modern, very complex conditions, the best method for taking a decision is by a group, that is, when the decision is made not so much by the commander, as by a group of generals and officers subordinate to him and with his participation. The use of such a method during the course of operational preparation will undoubtedly be detrimental to the act of training and educating the resolute qualities of a commander. It stands to reason that when necessary, the commander may discuss and seek

the advice of the chief of staff and other of his subordinates but he is the one who must make the personal decision.

Because the work load of the commanders has increased considerably, while the time for its execution has become quite short, some comrades have suggested that part of the commanders' functions be transferred to the chiefs of staffs, commanders of arms, and chiefs of services, thus simultaneously raising their responsibility and independence. This can hardly be correct. Can the responsibility of the commanders for troop leadership be decreased to any degree as a result of reducing the work load on them? Of course not. The commanders must always be fully responsible for troop direction, for the fate of the operation or battle, and, in particular, for the execution of those functions which, let us assume, would be transferred to the chiefs of staffs, the commanders of arms, and chiefs of services. The question is not one of reducing the load on the commanders, but in tirelessly raising their level of operational-tactical and military-technical training, in strengthening the practical skills of troop direction and their resolute qualities, and in the best organization of their work. This is the route which should be followed in preparing commanders for troop leadership.

Operational decisions may be general and local. General operational decisions are usually made for the entire operation or for the execution of the immediate troop mission, and anticipate the application of all forces and means of the operational ob'yedineniya. Local operational decisions are usually made during the course of an operation as a result of changes in the situation and anticipate the employment of individual operational ob'yedineniya or soyedineniya. These decisions, as an example, include: the use of second echelons and reserves; the forcing of water barriers and crossing zones of radioactive contamination; and the temporary transition from offense to defense in one sector or another. It should be kept in mind that sharp changes in the situation during the course of contemporary offensive operations will require decisions of this nature more frequently than in the past war.

The organization activity of a commander is usually based on the operational concept and the decisions taken to execute it with the objective of ensuring its successful execution.

The most important thing in the organizational activity of commanders is that of rapidly making their decisions known to subordinate troops. This is accomplished through the issuance of directives, combat orders, and instructions. Only after the troops have received the decision can they begin to put it into operation.

The commanders' decision must be made known to the immediate users so rapidly, so far in advance, that the latter would have sufficient time in which to make their own decisions and prepare the troops for combat operations.

The rapid transmission of directives, combat orders, and instructions in contemporary conditions assumes such importance that the decision as to the methods and means of their transmission should be taken to a lesser degree by the chief of staff of an operational ob'yedineniye or soyedineniye.

The fundamentals of organizing an operation or battle must always be personally determined by the commander. He is the only one who can give instructions as to who, what, and when it must be organized, so that all subordinate troops are in full combat readiness to execute promptly the assigned missions. In so doing, the commanders must identify what he will organize personally and what must be organized by his immediate assistants. The solution of this question will always depend primarily on the amount of time available for preparing for the operation or battle.

Thus for example, with a minimum amount of time to prepare for an offensive operation, the commander, undoubtedly, will assume the organization of the nuclear strike and the offensive by the motorized rifle and tank troops, as well as the preparation of the combat activities of the second echelons and the reserves. He can do all of this work with the commander of the rocket troops and artillery, the commander of the air army, the chiefs of the engineer and chemical troops, and with certain other of his closest assistants.

Simultaneously the chief of staff together with the chiefs of staffs of arms and the chiefs of services and staff sections, in accordance with the decision and instructions of the commander, usually organize the following: reconnaissance and other forms of operational support, communications and troop control, as well as control, over the combat readiness of the troops.

However in even the most complex situation, in which the preparation for the operation will be taking place, the commander must find the time in order to inspect personally the organization of the reconnaissance, air defense, and the preparation of the rear area.

In this manner, the chiefs of arms and services may participate in organizing the operation under the leadership of the troop commander and the chief of staff. Together with this, they will be conducting independent organizational activity for the execution of missions which have been assigned their arms and services.

On the instructions of the commander, and if time permits, the staff of the operational ob'yedineniye develops the operation preparation plan which identifies the organizational measures, those who will perform them, and the period of execution. This plan is approved by the commander.

Organizational activity is necessary not only in preparing for but in the course of the operation. At this time it is conducted in a more complex situation, therefore it has a different character and scope than prior to the beginning of combat activities. For example, in view of the extremely compressed time periods it will frequently be performed in a decentralized manner, simultaneously by various individuals responsible for performing it, and over a broader front. Under these conditions the basic measures are organized personally by the commander.

The political activity of commanders in a nuclear war will have a very important significance, inasmuch as in this kind of a war the role of the moral-political factor and political work among friendly and enemy troops will be far greater than previously. As the main organizer of an operation or battle, the commander must understand deeper and better than anyone else that the forceful effect of political work on the troops will be determined first of all by the concrete results of their actions during the course of the operation.

The commander personally identifies and assigns the missions for political activity. But before doing so it is useful for him to listen to the concepts and suggestions of the chief of the political organ and become acquainted beforehand with the fundamentals of the concept and the decision. In order to identify these problems correctly the commanding officer must be well aware of the military-political situation both in the country and in the zone of the forthcoming activities of the operational ob'yedineniye, and most important, to be constantly well aware of the moral-political condition of his troops and of the enemy troops.

In conjunction with the fact that political activity is conducted among friendly troops, enemy troops, as well as among the population, the basic mission in this work is divided: among friendly troops, enemy troops, and the population of the liberated territories.

The problems of political activity are placed before the troops not only in preparing for the operation, but also during its course, and particularly at critical times and at turning points during the combat activities. Their contents must be closely tied in with the situation and with the concrete missions of the troops.

The commander not only sets the basic missions for political activity but also determines the most effective forms of its work to ensure a successful execution of the assigned missions.

Troop leadership in a contemporary war demands that the commanders have not only an outstanding knowledge of their activity, an inquisitive mind, the capability and experience of troop direction, but also under the most complex and difficult situations, be able to retain fortitude and calm, and demonstrate decisiveness and initiative necessary for overcoming any dangers or difficulties encountered on the route to achieving

success in the battle or operation.

In this kind of a war the moral strength of the enlisted personnel will be subjected to great stresses and unprecedented trials, and so that they would be able to withstand them successfully it is necessary to indoctrinate the Soviet soldiers, and primarily the commanders, with high moral and political qualities. In so doing it is extremely important that they be indoctrinated in Communist consciousness, in the Marxist-Leninist outlook which will create a scientific basis for the proper understanding of the essence and character of the laws and tendencies of armed conflict and the development of military art will reinforce their confidence in our victory, will facilitate the successful execution of all missions of operational, combat, and political training and will be an effective means of countering the pernicious bourgeois ideologies. Only those commanders who possess a Marxist-Leninist outlook are capable of correctly understanding the essence and character of the most complex phenomena in the political and military situation, the natural law of armed combat, and will stubbornly and confidently strive for a victory by our great work.

The Marxist-Leninist outlook is the basis for instilling the commanders with fortitude, decisiveness, initiative, and other resolute qualities which have an important influence on troop leadership.

The fortitude of commanders lies in their constant responsibility and readiness to exercise bold and confident troop direction even under the most complex and difficult conditions. Under the effect of nuclear weapons and in a situation of massive losses and destruction, the commanders must take bold and intelligent decisions and must carry full responsibility for them before the Communist Party and the senior commands and subordinate troops. A stern judgment does not await that commander who, in striving to execute his mission in the best way possible, has permitted individual errors in his decision and suffers certain failures, but does await the one who did not find the necessary fortitude to overcome fear of responsibility and at the needed moment to make a bold decision required by the situation and accompanied by a certain risk.

The commanders must possess great will power which will help them to suppress their own vacillations, indecisiveness, and feelings of fear which emanate from danger and in the most complex situations must retain boldness of spirit, self-assuredness, clarity of thought, and a high responsibility. Such fortitude on the part of commanders is considerably greater than their inherent personal bravery, fearlessness, and even readiness to sacrifice themselves in battle.

However, fortitude will facilitate bold and intelligent decision-making only in those conditions when it is combined with coolness and self-control on the part of the commander which keeps him from making hasty, rash, and incorrect decisions and actions in difficult and dangerous situations and at the same time develops a feeling of confidence among the subordinate troops that under his direction they will be able to overcome all difficulties and achieve success.

Decisiveness by commanders is, first of all, an expression of their fortitude. This important quality which frequently expresses itself during war, has particularly great influence on the course of the combat operations by the troops. As we well know, the situation during a war is never fully clear. However, the vagueness of the situation does not free the commanders from making a decision promptly.

Making a decision rapidly, particularly during the use of nuclear weapons, and its firm and persistent realization guarantees successful troop leadership. It also happens, that tactical and operational decisions are made slowly and with lack of sureness, especially when a commander in trying to avoid mistakes, attempts to base a decision in the suggestions made by his subordinates. If an earlier made decision no longer corresponds to the situation, the commanders must find the fortitude to promptly reject it and immediately take a new and more purposeful decision. The military leader who is highly trained, courageous, decisive, full of initiative, and resolute is the one who will win out in a war. Indecisiveness on the part of a commander during the course of an operation will frequently result in inactivity and the defeat of his subordinate troops. Indecisiveness and vacillation, on the part of a commander, may bring about defeat even in the most favorable of conditions.

The commanders' initiative is, in essence, their developed independence, which in conjunction with their bravery and decisiveness will permit them to take bold and intelligent decisions promptly under those conditions when the situation has sharply changed and the missions being executed by the troops no longer correspond to it, and when there are no instructions from the higher command and action is necessary.

All decisions taken on the individual initiative of a commanding officer must be immediately made known to the higher command and to the adjacent elements.

An intelligent initiative is built on an understanding of the concept of the operation or battle, the mission of the senior operational ob'yedineniye and adjacent elements and is based in the desire to find the most effective decision, to make maximum use of favorable possibilities for the destruction of the enemy or the elimination of the danger at hand. Initiative, unless part or all of these requirements have been considered, may result in the destruction of one's own troops and failure

of the operation. Intelligent initiative must be encouraged and immediately employed for the development of the success.

Commanders may manifest initiative to the fullest degree in those conditions when their relation with the senior command is built on the confidence of the senior in his subordinates. Unless the commander is confident of support of his initiative it is impossible to accept it; moreover this may give birth to indecisiveness, passiveness, and caution in action in the commander.

All of the listed qualities of a commander may be trained and developed if they have will power, that is, the capability to show firmness and strength of character, under all conditions, permitting them to resist the effects of various dangers and stresses of war.

It is necessary to emphasize that from the very beginning of a war, the decisions of the commanders will be made and executed under the threat of enemy nuclear strikes. This is where the commanders will need power, firmness, and fortitude in order to exercise confident troop leadership under complex and difficult conditions.

A commander's will power will be more necessary in a nuclear war than in previous wars. Only resolute commanders are capable of demonstrating courage, decisiveness, and initiative under contemporary combat conditions. Only a resolute commander will be able to lead his subordinate troops out of the most difficult positions and achieve success where they are threatened with destruction.

The commanders must be very exacting towards their subordinates but combine this quality with a constant fatherly concern for them. This exactingness is expressed first of all in the desire to attain exact execution of orders and instructions, regulations, and statutes.

However, exactingness by military leaders should have nothing in common with crudeness, which only deeply hurts the soul of the subordinates, brings forth their just protest, and decreases their activity and efficiency.

"Vladimir Il'ich" recalls Fotiyev, "considered it vile and unworthy of a Soviet person and a Communist to be crude to an individual who is below him in position and therefore does not dare to answer." (Vospominaniya o Vladimire Il'iche Lenine, Recollections on Vladimir Il'ich Lenin, Vol 2, State Publishing House for Political Literature, 1957, p 213).

Crudeness is the sign of weak and spineless military leader, characterizing in him the lack of a capability to lead subordinates. A resolute commander has no need to be crude.

High exactingness on the part of a military leader toward his subordinates must be combined with the same high exactingness toward himself. Subordinates will always understand these stern but just requirements and will spare neither their life nor strength to carry them out.

Military leaders of the Soviet Armed Forces and the armies of the socialist countries, leaning on their subordinate troops, will never face the dangers of war alone. In this lies the great advantage over the military leaders of the bourgeois armies who are aligned with the ruling classes against their own people and their representatives in the army, and therefore cannot count upon their support. We should always remember this great advantage of ours and make every possible use of it in war.

It is evident from what has been said that the commanders must constantly and persistently ready themselves to their very responsible and complex activity in troop leadership so that it could be widely and successfully exploited in war.

For the purpose of training commanders in troop leadership, as we see it, further studies should be expanded on certain problems and questions of troop leadership. It would be useful to conduct such studies on both an historical and theoretical plain. It is necessary to show in these studies how the creative, organizational, and political activity of commanders and other military leaders are developed and should be developed in an operation or battle, as well as the effect that their personal qualities have and can have on troop leadership. In such studies, it is necessary to expose the dangers and difficulties which may arise during the process of troop leadership, and primarily to show the most effective means of overcoming them.

Historical studies on the questions of troop leadership should be based primarily on operations of the Great Patriotic War in which they played an important role. However, studies should not be excluded on the question of troop leadership in other operations of past wars if they bring out those sides of the actions of commanders in troop leadership which are also applicable for modern conditions. It is very important to study the direction of tank soydineniya and ob'yedineniya, since the experience of their combat actions during the past war may be useful for modern operations as well. Considerable interest and great value may be presented by studies on the problems of directing combined arms and airborne landing soyedineniya; as well as operational ob'yedineniya in operations in which the employed means of combat activities are close to modern ones.

Historical studies on the questions of operational ob'yedineniya leadership in offensive operations during the past war will permit, with great detail, to open all phases of commander activity in troop leadership, as well as those personal qualities which had a positive effect on this activity.

It is known that historical experience is irregular inasmuch as its conclusions are based on the stern practice of war. Each historical study on the problems of troop leadership will provide rich material for the theoretical elaboration of this important problem.

Theoretical studies on the problems of troop leadership must result in the development of the content and order of commander activity in operations and battles of a future war. In addition to historical experience, these studies must make maximum use of the experience of post-war training, which is the sole basis in peacetime providing the possibility for the fullest degree of studying all sides of commander activity in troop leadership.

In the theoretical studies, it would be useful to have a simultaneous examination of all phases of military leader activity in troop leadership, personal qualities, and methods for training these qualities.

Approximate themes for the theoretical study of the problems of troop guidance could be: "leading a tank division in an offensive operation"; "leading a motorized rifle division during the course of an offensive operation by a combined arms army"; "leading a tank army in the offensive operations of a front"; and "leading a combined arms army of the second echelon of a front in offensive operations", and others. Similar themes for theoretical studies, developed within specific frameworks and boundaries will give them the greatest purposefulness, concreteness, and depth, and will make them easier to understand. Subjects of a narrower nature would also be useful, which would be dedicated to the examination of a particular side of a complex activity of commanders in troop leadership in one or several operations or battles. Of course all of these studies should not be voluminous.

The theoretical development of the questions of troop leadership may be realized in the form of descriptions of all or several sides of the activity of commanders on the example of specific studies, practical training, or war games. The basic purpose of such descriptions, based on the concrete examples of combat actions of sovedineniya and operational ob'yedineniya formulated during the course of command and staff training or war games, would be to show the activity of commanders in troop leadership. In studying such descriptions, the young and still insufficiently experienced commanders, would be able to understand and master the basics of troop leadership more rapidly.

In the formulation of such descriptions, the selected concrete example is divided into several problems each of which contains a short tactical-operational-situation, the development of one of the questions of commanding officer activity, and the examination of this question. Furthermore, some of the problems may show well-developed directives, combat orders, instructions, and tactical-operational considerations.

The number of such problems in the description will be determined by the number of questions characterizing the activity of the commander discussed in the description.

The most effective form of training commanders for troop leadership is in command and staff and troop exercises as well as in war games, at which all phases of their activity are worked out in a concrete situation and their personal qualities, necessary for successful troop leadership are developed. The greater the complexity of the situation during such exercises and war games, the greater will be the results of commander training and education. The operational maturity and degree of training of military leaders for troop leadership receives its greatest exposure during exercises and in war games.

Experience has shown that during the course of exercises and war games basic attention is given to improving the creative activity of commanders. During such exercises and war games, their organizational and especially political, activity is occasionally insufficiently organized. The same may also be said on educating the personal qualities of the commanders. It stands to reason that we should not overlook the fact that organizational activity of commanders can be developed during all exercises and war games, while their political activity, as a rule, is developed only during troop exercises where real conditions are established for this.

Earlier we spoke of the fact that all activity by commanders in troop leadership must now be accomplished several times faster than during the past war. This rapidity of commander activity is now facilitated by a wide use of means of mechanization and automation. In view of this, systematic training exercises for commanders on the use of new technical means of control are assuming greater significance. These exercises must be preceded by exercises and war games. Everything must be done so that the commanders would not feel themselves constrained by this new equipment but would be completely at ease with it.

As it seems to us, the implementation of all of these measures can improve the training of commanders for troop leadership and will facilitate a higher quality of work by the staffs and political organs.